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The Cultivator & Country Gentleman.

DISCUSSIONS AT THE N. Y. STATE FAIR.

Steaming and Cutting Food for Stock.

A considerable number of persons were present at the City Hall on Tuesday evening to hear the discussion before the State Agricultural Society on the question of "steaming and cutting food for stock." Ex-President A. B. CONGER took the chair at 8 o'clock P. M., and introduced GEO. W. MOORE of Buffalo, who opened the discussion.

Mr. MOORE stated that he had first been led to look into the economy of using this character of food for stock by noticing the increased quantity of milk as the result of feeding cornstalks. He was using cut cornstalks at the rate of 3 bushels per day, and when he commenced putting on hot water, the cows increased their milk during the first week one pint per day, and during the second week one quart. By changing feed they shrunk. Afterwards made an experiment in steaming food and stock ate it up cleaner, relished it more, and were better satisfied than with usual manner of feeding. Next experiment was with 64 cows, where a steaming apparatus was employed; had been cutting and feeding hay for some days; hay was mouldy and musty, but by steaming it was rendered palatable, and cows were well satisfied with it. Had it not been steamed, a large share of the feed would not have been eaten. Cows fed on steamed food were healthier, were not troubled with constipation, and there was a saving of 33 per cent. in fodder. By cutting and steaming the feed, could keep 80 head of cattle where he kept 50 by the old method, and the product of milk was increased one-third. Had never weighed stock nor feed in conducting experiments—would like to have a statement from Mr. E. W. STEWART on this question, as he had had much experience in feeding steamed food.

Mr. STEWART had fed cut feed, hay and straw, for 10 years; had fed hay without cutting for experiment and believed 15 or 16 pounds of cut and steamed hay to equal 25 pounds not so treated. The food by steaming is rendered sweeter and more palatable. Steaming mouldy straw renews its flavor as if it had never been injured. Was unprepared to see such a change in the character of feed until proved by experiment. Cutting and steaming increased the value of feed 33 per cent.—there was no great increase of labor by adopting this system. All refuse material about the barns could be worked up into palatable food. Had made an experiment in feeding cattle and sheep on straw cut and steamed with 2 quarts of bran per head, and they preferred it to the best hay. Had experimented with ten head of cattle, feeding five on cut and steamed straw, and five on hay, and then alternating, and there was the greatest improvement with those fed on steamed feed.

In reference to cutting the feed, it should be cut fine—straw ¼ inch, cornstalks ½ of an inch long. One ton of cornstalks, if cut and steamed, was as valuable as a ton of hay; cut and steamed food could be used with great advantage for horses, and would cure incipient heaves in 3 weeks. By steaming the food it is better prepared for digestion, and when grain was treated in this way and fed, nothing was found in the manure but the husk, and hence all the nutritive value of the food is obtained. In experiments, have not weighed feed and animals, but find that those consuming 3 bushels of feed require but 2 when steamed; they at first eat same quantity, but after a little 25 per cent. less. When steamed food is used for cows it improves the quality of milk and gives a better quality of butter.

Cattle will eat roots and straw steamed together as well as if straw is mixed with bran. In reference to labor, a man will take care of the same number of animals as in ordinary way of keeping, only he must work a little harder. One man can do the work and care for 50 head with properly aranged barn and fixtures. An engine of four horse power could be employed for cutting feed, grinding the grain and steaming. The grain and meal should be mixed before steaming, and an apparatus similar to that used in Superphophate factories would be a great saving of labor in mixing, &c. The food should be fed warm but not hot. Had cut a ton of straw in 2¼ hours. One bushel of straw weighs 5 pounds, one of hay 8 pounds. Barley and oat straw is regarded as most nutritious, next wheat straw. Rye is not so valuable.

Mr. CONGER thought one of the most important points to be considered by the farmer is economy of

labor. He has a steam engine that does all the work in preparing food for stock for several days in advance of its use. It is worked on rainy days, or in bad weather, and thus by having the barn properly arranged with steaming box outside, a great saving of labor is made. It was a question whether better results could not be obtained by mixing the cut feed with a large proportion of water and let it lay till it heats than to use steam. In England it was thought that the cost of steam was greater than the saving made in food.

In good straw you get from 9 to 15 per cent. of matter that is soluble in water and is digestible, and if an acid reaction can be produced like that got by the chemist in his laboratory, a greater amount of that which yields flesh to the animal can be obtained. When hay is used, a large amount passes out unassimilated and indigestible, and it should be remembered that cut feed should have a plenty of water mixed with it.

Mr. GEDDES did not believe in cutting and steaming food for stock. Has a large cutting machine of four-horse power, but did not find it profitable to use it. He did not want cornstalks cut for sheep—the butts of the stalk had very little nutrition. His sheep wintered well on clean straw and cornstalks, and it was more economical for him to have the food consumed dry and uncut—has 150 tons of straw, and wants the sheep to eat a large quantity and tread all they can under foot.

LUTHER H. TUCKER said in Great Britain no one has done more by way of experimenting in feeding stock than Mr. HORSFALL. The theory that he adopted, was that feed cut and steamed in this way parted more readily with the organic constituents, and the effect produced was remarkable. Under this process of feeding, it was found too that the feed passing through the animal system was rendered in better order for the manure heap. But the practice of steaming feed had not been extensive; some had tried it, but cutting was more in favor than cutting and steaming. The English system of agriculture was something like that practiced by Mr. GEDDES.

LEANDER WETHERELL of Boston, regarded the effect of cooked feed on the health of animals as of great importance in the consideration of this subject. Pork and beef made on cooked feed was flabby and inferior to that made on dry feed. Any way of feeding that interfered with the natural mode was of doubtful character—the cooked feed was passed sooner than it should be, and on this account impaired the health, and was injurious. He alluded to the practice of Mr. PETERS, Mr. BIRNIE and Dr. LORING and said that he knew of no experiment that would warrant the feeding in this way. He did not know how innutritious feed can be made nutritious by cooking; for in cooking there is a loss. There may possibly be some gain in using innutritious feed simply by extending the stomach, but it was the opinion of Mr. W. that cooked feed for cattle was not of sufficient practical utility to warrant its adoption. Mr. LANG, he said, found that he had injured the health and constitution of his horses by feeding cooked feed. He preferred feeding long hay. We know from the human family that hot food loosens the teeth and he bears his testimony against the utility and economy of this mode of feeding.

Mr. FAXTON of Utica, advocated cutting and cooking the feed—cooked grains and vegetables were used for man's sustenance, and were more nutritious than in the raw state. Why not so for animals? He had had much experience in the keeping of horses and found that cut straw and hay with ground grain, corn and oats mixed in equal quantities, were best for horses in work—were more healthy, and could endure more than on uncut and unground feed.

Mr. STEWART, after eight years experience in feeding horses and cattle steamed feed, had found no bad results flowing from its use. He thought the position taken by the gentleman from Boston more theoretical than practical. He believed in wetting the feed—uses from twelve to sixteen gallons of water for 50 bushels of straw.

Mr. GEDDES believed that on a good grain farm every animal raised was a bill of expence—on such farms there was less loss in keeping sheep than other animals. He wanted sheep to convert feed into manure, and all animals in some way to aid in this work. No man should turn a good grain farm into a dairy farm.

Mr. WETHERELL said he had given a fact stated by Mr. Lang—he had given the testimony of others in regard to this question, but when the food of man and animals was to be compared, it should be remembered that the stomachs of man and an ox differ.

Mr. ALLEN thought the same rule would not apply to all kinds of stock. Cooked food to milch cows will produce more milk; the more you assimilate the food to the stomach for this class of animals the better—there was less labor in converting it to use and whatever labor was saved goes to the credit of milk. He had kept a milk dairy and cut the food, adding water, and let it get up to blood heat. Such food increased the flow of milk and no harm was done to stock.—Horses do better on ground grain and cut feed. Straw was not as valuable as many suppose; he preferred to cut the hay and work straw up under the feet of animals for manure.

Mr. E. C. DOE, from Ohio, gave the method of feeding stock in Illinois and the west, where the corn was hauled out in shock and fed. Hogs were turned in to follow the cattle and were found to thrive best in this way. Sheep also were fed after this manner. At the west stock men aimed to get flesh on the animal while turned to grass.

Second Evening's Discussion at the State Fair.

Fine Wooled Sheep and their Pedigrees.

We transfer to our columns Mr. SOLON ROBINSON'S Report of the Second Evening's discussion at the late State Fair at Rochester, on the question of the proper classification of Fine-Wooled Sheep:—

The subject of the evening was then stated, and Hon. HENRY S. RANDALL of Cortland introduced. He said the question was, should this Agricultural Society recognize any particular breed of fine-wool sheep. Now only one breed are recognized. All other fine wool or half-bred sheep are ranked under one head, or have no standing. In the long-wool sheep there are several classes. Yet he thought that all breeds were as dust in the balance, compared with the production of fine wool. The trouble with the prize list is, that it is cop-

ied from English lists. There, sheep are divided into three classes—fine, middle, and long-wooled sheep. The South-Down is the only real original English breed on the prize list of this Society. The best English writers regard all long-wooled sheep as having originated from one source. He entirely objects to the classification of English sheep. We have now American, Saxon, French and Spanish merino, more distinct than the long-wooled breeds. The Saxon are the finest wooled sheep in the world. The French and American are medium—the latter are best. French Merino are twice as large as Saxons, and the skin is very much corrugated. The American Merinos are noted for their black color, very soon after shearing. There are other distinctions of breed among Merinos. The Spanish breed were kept very pure in Cubanos. These were a more fixed variety than any of the different breeds of English long wools. He then gave a history of the early importations of fine-wooled sheep. The pedigrees of these sheep are very easily traced back to the originals. Neither French or Saxon breeds are as profitable to farmers as the American Merinos. He congratulated the people that in future a high tariff must prevail, and we shall manufacture our own fine cloth. Mr. Randall contended very strongly that the prize list of the Society should be revised, so as to offer prizes more commensurate to the value of fine-wooled sheep, which is greater than that of all other breeds. He contends that the American Merinos are now superior to any even in Spain, and that we have two distinct sorts, the Paular and Infantado.

Mr. PETERS of Genesee county thinks the prize list needs modification upon all points, so as to bring out the fact whether it is not more profitable to devote the lands of New-York to other purposes than growing sheep. Not over 30 per cent. of the land of the State is adapted to profitable growing of fine wool. He would recommend prizes for long wool and short wool of English breeds, and one of fine wool sheep. He would not recommend the Society to recognize color of wool nor wrinkles of skin.

Judge PETTIBONE of Vermont, said he could not agree with Col. Randall, notwithstanding he is regarded as authority. He denies that any Infantado sheep were ever imported. He thinks there is a great deal of self-conceit among sheep men, in saying that their sheep are Paular or Infantado. If a man certifies that his sheep are Paular, I want the testimony, but not one iota can be given. Consul Jarvis says but seventeen pure Paulars were ever imported, and these have been so mixed with others that they cannot be separated. He don't believe in distinguishing breeds of sheep by the wrinkles, because they are very apt to change. Neither does he believe in breeding sheep that produce fleeces that are so greasy that there is hardly wool enough in a fleece to hold the grease together. When he first began breeding fine-wooled sheep, near ly forty years ago, 14 pounds of wool was considered a good fleece, and that was about as heavy in wool as the fleeces are now that we have learned how to make them weigh. The big weights are not made by wool, but by grease. A fleece that weighed 15 pounds, when cleansed only weighed 3 pounds. He didn't believe in making such fleeces.

Mr. RANDALL replied to Judge Pettibone at some length, giving his view of the testimony that proves certain flocks are Paular sheep.

Hon. GEO. GEDDES—I believe this an unwise step of the Executive Committee, to submit this question to a public meeting. We formerly had three classes of fine wool sheep prizes, and the result was that one man selected Saxon, French, and Merino lots from one flock, and got prizes upon each class. And he believes that but one man in this country has a pedigree, and that is mixed. I have seen four distinct kinds of rams exhibited from one flock. I agree that it is difficult to compute the value of fine-wooled sheep in this country, but I do not think it possible to promote this interest by dividing them into classes. If this meeting can instruct the committee how to promote this interest, let it be done, for it is difficult and important. I think this discussion this evening has done no good, and I think the best way for us to do, is to refer the matter back to the Executive Committee.

L. F. ALLEN of Black Rock, said, in relation to pedigree, the object of the Executive Committee has been to draw out the greatest excellencies possible in farm stock. Yet the action has been unequal. One owner of Hereford cattle has carried off the whole list of prizes for a series of years. Is it policy to continue these prizes, when it is evident that the public do not appreciate the breed? else he would have more competitors. I do not think that this meeting can settle this disputed point about sheep. It is not a good time during such an excited time about high prices for sheep and wool, to settle disputed questions. I have seen men run crazy about sheep before; and only a few years since the country was afflicted with a great hen fever, and men paid $150 a pair for Shanghais, dear at $5.

Mr. GANT of Western New-York—I am sorry to find that the discussion to-night has resolved itself into one about pedigree, instead of practical facts about how to keep sheep for the greatest profit, and what kind of sheep to keep. Such a discussion would be preferable to farmers. We have greatly improved our common flocks, but they are not quite right. He then pointed out various peculiarities of different strains of sheep; some are adapted to one locality and some to another, and a discussion of which sort is the most suitable for particular localities, would be a profitable question.

Hon. Mr. GRINNELL of Iowa, said that he believed that there might be a greater subdivision of the prizes, so as to open the prize list to the mass of farmers. He said that three hundred thousand sheep had been taken to Iowa the present year, notwithstanding the State had sent fifty thousand men to the war. For his part he would offer three prizes upon fine wool sheep, hoping it would promote the wool interest. And he thanked the rebellion for one thing; it had induced men to wear more woolen clothes, which were better than cotton.

Mr. PETERS inquired of Mr. Randall how many families of fine-wooled sheep were in the present show, and he answered three, distinctly—Paular, Infantado, and Negretto or Merino, and thought that any man who was not half blind or very stupid could distinctly see the difference. Mr. Peters was anxious to have him describe this difference, so that people who were a little stupid could know how to distinguish these varieties; but the chairman interfered, and endeavored, in his very blandest manner, to stop the discussion at this point.

Third Evening's Discussion at the State Fair.

Dairying and How to Get the Cows.

The following notes of the discussion on this subject, at the recent Rochester State Fair, are mainly those of Mr. ROBINSON of the Tribune; a few of the closing paragraphs are from Mr. WILLIARD of the Utica Herald:

L. F. ALLEN of Black Rock, said that he was in hopes that a subject of so much importance as this would have brought together a large number of New-York dairymen. It is a very great interest, notwithstanding so small a portion of the State was fitted by nature for the most profitable dairy purposes. For instance, you cannot make as good cheese here at Rochester as in some other counties. He then instanced the great advance in the value of land in Herkimer county, because it is a good locality for dairies. But to the question, "Should dairymen raise their own cows?" he said, I assert that no rule can be laid down for all situations. The test of a good cow is the largest quantity of good milk, and the question is whether he should perpetuate the like of such a cow when the old cow fails. To do this you must breed from a bull that is known to be of a good milking family. Like produces like. Keep the milking quality of your dairy stock always in view. In raising calves for the dairy, different treatment should be followed from what it would be in raising calves for beef. In his own experience in raising sixty calves from good milking stock, only one failed. A good milking cow has particular marks, which may be learned easily. I prefer to breed from thorough-bred stock, whatever kind it may be. Some dairymen give as a reason why they do not raise calves, that they can buy cows cheaper than raise them. That matter will bear examination. Breeding for beef will breed out good milking qualities, so that a man who breeds for himself can make better cows than he can buy. When bought from droves, the purchaser is likely to get cows with vicious habits, and poor milking qualities. A good cow will produce 150 lbs. of butter and 400 or 500 lbs. of cheese, and such a cow is worth $100, and she can be raised for less money than you can buy her. This he undertook to demonstrate by the average price of hay, calculated at $10 a ton, and gives the cost of the cow at three years old at $30. He related an anecdote of a dairyman in Erie county, who adopted the plan of raising his own dairy cows, by which he got a stock of superior milkers; the heifers at two years proving excellent cows. He bred in-and-in, and got the best herd of milkers in the county. He finally recommended all dairymen to raise their own calves, where hay averages not over $10 a ton. As to large or small size, as a general rule the selection should be cow that give milk in proportion to the amount of food they eat. He considers Ayrshires good grade stock, and generally good milkers, but he does not wish to advocate nor recommend any particular breed.

GEORGE A. MOORE, Buffalo, has been four years trying how to get the best herd of dairy cows. His experience is that where a man breeds his own cows, he gets the best and has them of uniform size and color, and the most profitable. He intends himself in future to raise calves and establish his own breed. On his farm Devons give richer milk than Durhams, and keep more healthy. There is much more attention given of late to breeding cows for dairy. A cow that won't yield 400 lbs. of cheese a year is not worth keeping; yet in Erie county 300 lbs. may be considered an average. I find small sized cows the best on my farm, which is uneven on shale rock. The large cows do not give as much in proportion to feed as small ones. I believe a well kept cow will be good at fifteen years old. A cheese-maker at Rome, told me that he had a native cow that would make 700 lbs. of cheese a year.

Mr. ALLEN would put a heifer at about eighteen months old, so as to produce her first calf at about two and one-quarter years old. He had had heifers produce at eighteen months old, but that is too young, and a bull should not be used at less than two years old. Breeding heifers too young wears them out young. I would not recommend milking cows more than nine months a year.

Mr. MOORE said that he did not let his cows go dry over six weeks on the average. But to milk cows ten months, they must be well fed and well cared for. My theory is to put cows in the barn at the first cold weather, and keep them there till spring, letting them remain tied all the time. Experience has confirmed the wisdom of that policy. But the barns must be arranged with good ventilation, and the stables kept clean and well watered. He has tried the plan upon old and young cows, with equal success. Dairymen have found it the most profitable to sell their calves quite young. He feeds in a manger or trough, three times a day. The cows are fastened by ropes to rings that slide upon a stanchion.

Mr. LOOMIS of Herkimer said—some neighbors think that they fail if they do not average 600 lbs. of cheese to a cow, in a dairy of 100 cows, and some have made 825 pounds average upon small dairies. The best cows in Herkimer county spring from old native stock crossed with Durham, and the progeny crossed with Ayrshire. The best cows are made by educating the calves from the start, and one feed every day for a year; at first new milk, and then whey and pasture. You may make better calves upon new milk, but not better cows than they do when fed whey. Calves well fed will come in at two years. Cows should be fed good hay and ground oats or shorts when in stable, and that feed makes a flush yield of milk. When autumn feed fails, artificial feed must be given, so as to keep up the full amount of cheese. That is the way Herkimer men make 700 pounds and over, of cheese per cow. The first cold of autumn is most detrimental, and then cows should be housed as surely as in winter. Clover is the best kind of hay. Those who purchase cows do not get the best results. Occasionally a good cow is purchased from out of the county, but the best cows are obtained by raising calves.

Doctor GEORGE B. LORING of Salem, Mass., being called upon to state some facts about Ayrshire stock, said that he came into possession of a farm a few years ago, with a very mixed lot of some forty cows, and he endeavored to improve the lot by purchasing, and failed, and then tried to raise his own calves. He tried Alderney, and they did not answer, and then tried Ayrshire, with which he is well satisfied. He breeds all his cows for the dairy from calves on his own farm, which he considers a great advantage, because they

are always at home, healthy, and acclimated. He has a purpose in view, and breeds for that purpose. That is the way he has got a good dairy herd. He does not find it expensive to make his own cows. His heifers do not cost him over $30 or $35, yet if he had to buy them, he would have to pay $60 or $75. He finds it important to use bulls descended from good dairy stock, and he breeds in-and-in. He said: if you cross-breed, you may breed out your good milking qualities. Feeding, too, is of the utmost importance. New-England has made a breed of excellent red cattle, the oxen of which weigh 35 cwt. to 40 cwt. The The kind of cows that I should prefer for milk are the Ayrshires. The Durham is generally preferred for beef. The Ayrshire for milk are as valuable as the other breed for beef. They are of moderate size and of excellent constitution. I never saw a thick meated-leg cow that was a good dairy cow, because they do not hold out well. Cows are milking machines, and the more quiet they are kept the better. They do not need to travel. They are better tied in the stable than roaming about. If the cow is sound, there is no detriment to the stock in breeding from one quite old. One of the marks of a good cow is in the tail. It should be tapered like a drum stick. I trust my heifers to give milk up to about a month of the time of calving.

Mr. ALLEN said that the fact that cows are strongly attached to their homes is overlooked. There is no animal more benefitted by domestication than the cow. She can be made to feel that she is one of the family, and this fact is one of the strong reasons in favor of raising our own calves, and domesticating them at home from birth. They are then more docile, and much more likely to make profitable cows than those that may be brought together every year from strange places, for they often lose considerable time in getting wonted to their new homes. "I have," said Mr. Allen, "several times sold cows from my farm to persons living in Buffalo, and those cows, when they get away, have traveled some miles, and then swam Niagara river to get back to their old home upon Grand Island. This love of home is a strong point in favor of those who contend that it is most profitable for dairymen to raise their own calves. It is not always most profitable to sell them, notwithstanding it appears so at first view; because a calf bred for the purpose of making a good milch cow will often prove more valuable than a cow that can be bought at the full cost of raising the calf."

Major BROOKS of Wyoming, contended that a man who possessed a cow of remarkable milking qualities, and had it in his power to perpetuate those qualities by raising her calves, committed a positive wrong upon society if he allowed himself to be tempted by any immediate prospect of gain, by selling such calves to the butcher. He believes that it is altogether a mistaken notion that dairymen cannot afford to raise their own stock. It is the only way to improve it so as to bring it up to the highest standard. A cow that will not average more than three hundred pounds of cheese per annum is not worth keeping. At four hundred pounds average she just begins to be profitable, and the profit then increases with the quantity in almost geometrioal proportion, so that a cow that that gives six hundred pounds is worth nearly double as much as one that gives five hundred pounds, and it costs very little more to keep those which Mr. Lewis says average eight hundred pounds, than it does to keep those which Mr. Moore says average only three hundred pounds.

Mr. MOORE stated, in relation to the love of home that cows have, that he had a cow brought from his farm to his house in Buffalo, where she was cared for in the kindest manner, yet her longing to return was so strong that she failed in her milk nearly one-half.

A. B. CONGER did not think that dairymen should confine their attention wholly to the Ayrshire, though it is a great milker. There are in other races larger as to size than the Ayrshires, good animals for the dairy. Some Short-Horns produce 32 quarts of milk per day. Mr. WHITTAKER'S largest milkers came from a dairy tribe that were great milkers. There are Devons that are great milkers, though the Devon breeds of England for the last half of the last century had been turned to beef making. The farmer should look to the character of his soil before deciding as to what breed is most profitable for him to raise. If he has a limestone soil, with plenty of rich mould, where the Short-Horn will thrive and make bone, he may get a breed that will yield 30 quarts of milk per day and obtain better results than from a smaller breed; but if his pastures are light and lands rough, he should never select the Short-Horn to travel over them, as the legs of this breed of cattle do not admit of traveling. Every one must decide for himself in this matter, but in making up his mind should look to the quality of soil and grass in selection of stock. In breeding, he would use thorough-bred bulls, as the bull throws his progeny more after his mother than his sire—would not cross a thorough-bred of one breed on thorough-bred of another. The dairyman should breed in reference to milk, and if he violated laws in breeding, must take the penalty. The cow should rest one month before coming in.

LUTHER H. TUCKER thought the question of breeds should be determined somewhat from the use which is to be made of the milk—thus one class of animals might be better for the butter dairy, another for cheese, and still another for the milk dairy. The Ayrshires and Short-Horns were adapted to the milk dairy; but if butter was to be produced, an admixture of the Alderney blood might prove serviceable. The butter dairymen of Chester county, Pa., found that this admixture of the Alderney or Jersey blood in their herds was productive of the best results. Cheese differs from butter, and he supposed that cows giving the largest quantity of milk were best for the cheese dairy. The Devon cattle were better for butter than for cheese. The milk dairies of Great Britain, where pastures were rich, were stocked with Short-Horns, and where the character of pasturage was such as to carry a large frame, a breed of this kind might open an additional source of profit.

The discussion was animated and well sustained throughout the evening. At its close there seemed to be a general desire on the part of those present that the subject be continued over for discussion to next annual meeting.

A man that is young in years, may be old in hours, if he has lost no time.

Liquid Manure---Practical Remarks.

Liquid manure operates with great effect in two ways. One is by the readiness with which it is intimately diffused through the soil and between its finest particles. Wherever, therefore, the minutest rootlets of a plant penetrate, they find this manure ready for immediate use. A more imperfect mode of diffusion is the intermixture of solid manure by the ordinary process of plowing and harrowing. The completeness of this intermixture varies extremely—from the finest pulverization which the repeated passage of the harrow tooth effects in old rotted manure, to the coarse lumps which are pitched carelessly out of the ground, and left unbroken and half covered with the plow. When we remember that the forming roots are smaller than the finest thread, and exceedingly delicate in structure, we may well imagine the entire unfitness of a soil made up of hard lump sof sterile earth in contact with lumps of coarse manure to feed such a delicate organization. One might as well attempt to feed young infants with a mixture of brick-bats and sea-biscuit. It is easy to understand the great superiority of the fine intermixture effected when the manure is dissolved in water and carried all through the soil in this state.

The other way in which liquid manure operates to good advantage is by the ready supply of nutriment which may be given at any time to growing plants. By ordinary manuring the fertilizing material is mixed through the soil in a solid state, and portions are successively dissolved and imbibed by the roots. When suplied in the liquid state, on the contrary, it may be fed to the plants more quickly and more copiously, and is ready for use the moment it reaches the roots. Hence its wonderful effects on all succulent garden vegetables, such as cabbages, asparagus, pie-plants and melons, which can scarcely be over-fed in ordinary manuring. Those who have read "Ten Acres Enough" will recollect the statement of some fine examples of of the wonderful growth of vegetations where liquid manure was freely used.

But it must be remembered that in applying manure in a liquid state it is necessary to cart or otherwise convey a large bulk of water—many times greater than the mere weight of the fertilizing material. While therefore it does well for gardening purposes where several hundred dollars worth are obtained from the waterings of a single acre, it is comparatively unprofitable for common farm management. It would indeed be much superior to the clod-and-lump application already mentioned, but a better mode than either may be adopted for the use of manure on a large scale. This brings us to the recommendation of a method which we have already urged upon our readers—namely, autumn surface application. Instead of dissolving the soluble portions of the manure in water, and then drawing this bulky solution over the surface of the farm, draw the much lighter solid manure, and spread it thinly and evenly over the whole surface, where rains and melting snows may dissolve it at a cheaper rate and carry it down into the soil. A single inch of rain amounts to over three hundred hogsheads per acre—an amount that would be very difficult to draw with teams, but which costs nothing when descending in rain for dissolving the manure already spread.

From all the experiments which we have tried on the subject, and from the observations of others, we are induced to adopt the opinion that manure applied in autumn in the the best manner, is worth from twice to three times as much as when left till spring and spread upon the soil and plowed in, in the usual manner; and more than six times as much as when applied in the spring by the clod-and-lump practice. Circumstances, such as the amount of rain falling, the dryness of the season, and the proportion of clay in the soil, will, of course, considerably vary these results; but we speak of the average.

We have never found the fall application of manure to succeed better than by the following method:—Spread it on grass land as early in autumn as practicable; break it fine, and distribute it equally over the whole surface; if quite coarse, it will be necessary to employ a hand with a fork on purpose to reduce it and spread it evenly. If the manure is partly rotted, and easily pulverized, running over the surface after spreading with a fine harrow will be of use. As soon as spread it begins to operate on the grass, both protecting and enriching the surface, and the green growth soon hides and covers all the manure. During fall, winter and spring, the water carries the enriching particles down the grass roots to the depth of a few inches. In the spring, a few days before the usual time of planting corn, turn over the sod in the most perfect manner with a good plow. A Shares' harrow made with steel plate teeth, will now pulverize the upper surface of the sod in the most complete manner, and render it ready for planting. A crop of corn on ground manured and prepared in this manner will tell its own story.

No one, however, must blame any one but himself for want of success if he does the work in a bad manner; for instance, if he throws coarse manure on the surface in large bunches, so that one spot will be heavily dosedwith the leachings, while whole square yards are entirely destitute, he has no right to claim anytning.

In connection with this subject, the importance of pulverizing and scattering the droppings of cattle in pastures before cold weather sets in, will naturally suggest itself; also the increased vigor which may be imparted to young fruit trees, currant bushes, and raspberries by this same autumn application of manure.

Fruit a Protection Against Disease.

Nearly every period of prevailing disease has some natural remedy. Colds and influenzas are usually most prevalent on the approach of the cool weather of autumn—the period of the ripening of water melons —this fruit when partaken of very largely proving an admirable diaphoretic, and carrying off diseases of this kind in their incipient state in a most efficient manner. Fevers are also most prevalent at this time of year; and nothing affords a better protection against them, by keeping the system right, than a regular and moderate use of well-ripened fruit. Emigrants to the West, who have carried with them plenty of dried fruit, have nearly always escaped the prevailing fevers of those new countries, so long as the regular supply of this fruit has lasted. The same result has taken place where they have given immediate attention to

raising the small fruits copiously. A well-cultivated plantation of strawberries will last nearly a month and prove of great value to the new-comers the second season after the dried fruit is exhausted. The other small fruits will not bear so soon, but, by good management the third year will exhibit plentiful crops of currants and raspberries to follow the strawberries; and after these are gone the Rochelle blackberry will continue to ripen for a month longer. Dwarf pears and dwarf apples on the Paradise will begin to bear considerably in about three years, and a few dozen of each will prove very useful to the new settlers.

Thoroughly ripened grapes are one of the most wholesome of all fruits, and such hardy free growers and good bearers as the Hartford Prolific, Diana and some other sorts, will begin to furnish supplies in the second or third year—especially if a few are set aside for producing immediate crops with a secondary reference to pruning for future bearing.

We mention these fruits for the use of new settlers because such families are more apt to remain entirely destitute than those living in older settled portions of the country. Good fruit is, of course, equally useful and wholesome to all, but the latter may obtain it at all times without much difficuly. The common opinion that fruit is unwholesome arises from the practice of eating it while hard or immature, or badly ripened under unfavorable circumstances. There are some kinds of fruit which are scarcely ever seen entirely ripe; take, for example, the Isabella and Catawba grapes in the Northern States. The Isabella first turns purple, when it is comparatively hard and sour; after a time it matures, becomes sweet and quite different in character. The Catawba as grown in the North only assumes a light-copper color, and never the deep, rich purple which it exhibits when grown in the best manner in the neighborhood of Cincinnati. Imperfectly cultivated and badly pruned, neither of these grapes show the excellence of quality which they are found to possess under the best management. It is not fair to charge them with the unwholesomeness which they have when only under neglected culture. The cherry, so often pronounced unwholesome, is scarcely ever eaten ripe by many. The Black Tartarian is often seen in market when merely of a dark-red and only two-thirds of its full size. Some intelligent men, who have been accustomed to eat the May Duke in the same immature condition, have expressed their surprise at its richness and excellence when allowed to double its size and become perfectly black. There are two more lately-introduced fruits which are much complained of for their sourness, namely, the Wilson strawberry and the Rochelle blackberry. Those who eat them pick them when immature. The blackberry, especially, is often seen quite hard and too sour for endurance; but allow it to swell out in size and become of a smooth, shining black, and it is sweet and delicious.

Now, see that the fruit is fully ripe, and partake of it in regular moderate quantities, and not at the caprice of a changeable appetite; and not only nothing need be feared, but a great benefit in the health of the partaker will be the result. On the other hand, nothing can be more injurious than eating badly-grown, half-grown, badly-ripened fruit, especially if in large quantities under the influence of hunger after abstinence.

Time of Putting the Ram with the Ewes.

October is quite late enough, under any circumstances. Mark each ewe, either by coloring the ram between the fore legs or otherwise, and when a certain number are thus to be distinguished from the rest change the color, making a memorandum of the date whereby you will know when the yeaning time arrives how to part them from the rest; by this means, should the weather be severe, it will be easy to contrive a warmer place for each lot to have their lambs in, thus keeping the ones about to produce young, and while they yean, away from the bulk of the breeding ewes. September is not too early to mate the sheep where they have a good shepherd, for if properly fed and managed the early lambs will be the strongest and go through the following winter best, besides which they can be weaned by the first of July, which gives their dams such an opportunity to get in good condition, through which they will have more lambs, and both ewes and tegs will cut more wool; the latter, having been born two or three months earlier, and kept all the while in a growing and real thrifty state, will on that account cut two to three pounds of extra wool; and the ewes, having July and August to lay on flesh, instead of being sucked to death's door in hot weather, will keep strong and continue to grow wool as fast again as when they go through the autumn and commence the winter with barely meat enough to cover their bones. Give sheep plenty of the right kind of food to suit the season of the year and the state they are in, and no danger from disease or any cause need be apprehended, for nine times out of ten when aught ails the flock it is easy to trace the foundation of the ailment to some mismanagement, either from too close confinement or irregularity in feeding. No shepherd worth the name of one, will allow old and young, or the two sexes, to run indiscriminately together, for sheep ought to be made to clear up their food by not having more given them than they will eat at one time, just as particularly as cows or horses, in which case the strongest pick all the best and the weak or younger ones are pushed about and get the worst portion; even if abundance of rack and trough room is given, the evil is only the less—it is not entirely removed. By adopting the plan of weaning early, and getting the ewes in a thriving condition at the period when the ram has access to them, they will in the first place come in season regularly, nineteen out of twenty will conceive from the first connexion, many will produce twins that would not otherwise, and lastly, every one, excepting accidents, will bring forth young and come within one month from the time the first is dropped, thus saving trouble and making an even lot of lambs. Each division of a flock ought to look as if run through one mould. J. B.

A Profitable Flock.—A Vermont paper mentions the case of a farmer who last fall drove up to his barn 370 sheep to winter. He sold 84 lambs and fat sheep for market, for $556. He sold his clip of wool for $754, and then had a flock of 70 head more than he had in the fall! He thought his flock by no means presented an extraordinary case.

Praise is valuable only when it comes from lips not afraid to condemn.

Composting Muck---Reply to Inquiry.

I notice a gentleman inquires through your pages, of the manner of my composting muck with barn-yard manure.

Without claiming any special superiority in my own course, it shall be freely given. If we have in the spring a quantity of yard-manure, which is too coarse and unfermented for application the same season, and which we really need for use for our spring and summer crops, we take muck which has been seasoned, by which we mean *frozen* the previous winter—and here let me say that muck should rarely be used that has not been exposed to the pulverizing action of the frost—and commence forming a pile either in the barn-yard or some convenient place, by putting a layer of muck at the bottom one foot in depth, and of the breadth of surface we wish to form the pile, and next the same amount of the coarse undecomposed manure from the yard, and thus continue with alternate layers of muck and manure, until the manure is exhausted. A heap 15 feet in width is about the right dimensions, both for driving the cart on, as well as to fork over. Let the last, as well as the first layers be of muck. This should be done as early as convenient in the spring, or as early as the muck and manure can be properly worked. Allow it to remain in this state two or three weeks, when the entire mass must be thoroughly forked over, beginning at one end, pulverizing all lumps, both of muck and manure, and have it left in as porous a state as possible. If this is done in the first part of April, or as soon as we begin to have warm weather, the mass will soon show signs of generating heat, more especially if a portion of it has been horse manure, and by the time corn planting arrives will be found thoroughly fermented and fine—suitable for applying in the hill or otherwise.

Indeed one would be surprised to see so great a change wrought in the mass, in a few days or weeks at the most; simply by heat, the coarse, strawy mass is fully decomposed and converted into suitable plant-food.

If, at the time of forking over, a moiety of ashes be applied, say five to eight bushels to the cord, it will prove highly beneficial, assisting very materially in the heating process.

We are at the present time engaged in composting a quantity of shed manure, which has become so hard by repeated treading as to unfit it for proper application, and we are composting it as above described for the purpose of softening it and getting it into proper state.

If my manure was always in just the proper state for application, perhaps we should not compost it so frequently; but where it can be changed so directly from an unusable to a usable state, it seems to me a process which in every sense of the word, PAYS.

Do not farmers often find themselves in the spring of the year, with a yard of coarse manure, made up largely of straw and corn-fodder, and who wish to apply it the same season direct to crops that will get the benefit of it the same season? To all such I can recommend this course.

My own experience in applying muck direct to soils without composting, has not been very satisfactory; though on light soils have known it to prove advantageous.

Where muck cannot be procured, sward from the wayside, or anywhere on the farm where it can be spared, will prove, usually, equally as good, though perhaps requiring a longer time to decay.

Salisbury, Conn., Oct., 15, 1864. WM. J. PETTEE.

WHAT CONSTITUTES A GOOD FARMER.

In order to answer this question intelligently, we need to understand what good farming is. Well, what is it? We often hear it said, that such a man is a good farmer, because he keeps such good fences, or such good tools and implements, or such good cattle, horses, or sheep, when that very man is ruining the productiveness of his farm by his unfarmerlike system of management, notwithstanding he has good fences, good stock, good buildings, and beautiful surroundings.

Again, we hear it said that such a man is a good farmer, because he always raises good crops of grain. But good crops of grain are by no means a certain index of a good farmer, any more than good buildings and good fences furnish certain evidence of a good farmer. As it is the cherished affection and decided course of conduct of a man which enables us to form any correct opinions of his true character, in a moral or religious point of view, so we are to decide on the excellence of a man, *as a farmer*, by his practices and by his system of farm management, when viewed as a whole—as all moving forward in harmonious combination, with every thing just as it should be.

We will enumerate the most prominent and important characteristics by which a good farmer may be designated.

1st. A good farmer makes as much manure as he can from the productions of his fields, and suffers none of it to be wasted, but applies it annually to the soil. 2d. A good farmer keeps his soil in a good state of fertility by adopting a rotation of crops, which is adapted to the kind of soil which he cultivates. 3d. A good farmer will underdrain such soil as may be excessively wet, before he attempts to raise a good crop of anything. 4th. A good farmer is one who derives his profits from the soil which he cultivates, and pays all his expenses from the income of his farm, and at the same time does not suffer the productiveness of his farm to deteriorate.

There are a great many farmers in our country who have commenced farming operations on a poor farm, with little or no capital at all, and have supported their families, erected their buildings, paid for their land, and have no other source of revenue but their soil; and at the end of twenty years, their soil would produce more than twice as much of any kind of crops which they were accustomed to raise, as it would when they commenced their farming operations. A man that can do that may be denominated a good farmer, notwithstanding there may be room for improvement still further, in some of his practices.

5th. A good farmer will take an agricultural paper, and will feel willing to communicate a portion of his good experience for the benefit of other farmers, who may be inquiring, with no little anxiety, how they may improve their system of farm management.

These are a few of the characteristics of a good farmer; and they are communicated simply to awaken a spirit of improvement, and to induce farmers to look around them and see if they come up fully to the standard in all their farm practices.

Auburn, N. Y. S. EDWARDS TODD.

BLIGHT IN TREES.

The fire-blight in the pear has puzzled cultivators as to its cause and prevention, and we do not now propose any attempt to solve the difficulty, but merely to record a few observations on similar disease in other trees which possibly at some future time may throw additional light on the subject.

The singular freaks of the pear-blight are worthy of a passing notice. Years ago its destructive effects were observed in certain localities; and those localities were consequently supposed to be specially and permanently liable to the malady. In other places again it was entirely unknown, and these were marked as the best places for planting pear orchards. Among others, we well recollect that the vicinity of Lockport was designated as a region entirely free from this malady. Orchards were planted there to a considerable extent; but in a subsequent year, the blight made such a terrific sweep through them as to dissipate all previous illusions. Some years ago, when examining the orchards in the vicinity of Boston, we learned that the fire-blight was quite a stranger there, by the fact that the President of the Massachusetts Horticultural Society, (the late Samuel Walker,) on whose grounds we were walking, pointed to a little dead branch on one of his trees containing a few light-brown, withered leaves, and anxiously inquired, if that was fire-blight? He had evidently never seen it, nor witnessed its peculiar development, which those cultivators who have once witnessed it, are not likely soon to forget. We have not since heard of its visiting that neighborhood, but that it never will is not quite so certain.

Our object at present is merely to mention similar appearances on other trees. Several years ago, when it was very prevalent during a particular season in Western New York, we observed the branches of other trees similarly affected by suddenly dying—the more sudden the death the blacker the foliage. Even the elders which grew along the fences of slovenly farmers exhibited the fire-blight distinctly. The apple orchards were badly affected in their peculiar way, that is, on only the small shoots, or tips of the branches, the descent of the diseased sap not having power to carry the disease downward to any extent, as happens in the case of the pear.

During the present season a similar malady appears to have attacked evergreens. We observed it first in the Balsam Fir, where shoots only three or four inches long became affected during the excessive heat and drouth of the past summer. Specimens of some of the pines were sent us by S. Rhoades, Esq., of West Philadelphia, showing a similar result, the tip shoots being dead and the leaves a rusty brown. A fine specimen of the Pinus excelsa on our own grounds has mostly perished, the lower branches only remaining fresh; but the leaves have not been discolored as in the other instances, and it may not be precisely the same difficulty. Among several thousand pear trees growing within a short distance, not a single case of genuine fire-blight has occurred this same season; although a few have perished by that peculiar disease of the roots which has been observed of late years. But, in the latter case, the leaves, instead of turning suddenly black, as in the genuine blight, have only withered and become light-brown, evidently in consequence of the mere lack of nourishment, the supply of which could not be obtained through the dead roots.

There is another form of local disease which we have not mentioned, nearly allied to the preceeding, namely—that which causes dead patches or portions of bark on the trunk of the pear tree. All these show that there is a tendency in some trees to local and circumscribed disease, variously effecting different trees, but in some, and especially in the pear, producing a poisonous sap, extending the trouble to other parts, and suggesting the remedy of prompt amputation. It is also obvious that as these appearances are more apt to be openly developed, (if not caused,) during very hot weather, a system of training should be adopted that shall distribute foliage evenly through the head and prevent the sun from striking severely on any exposed portion. Succulent growth, it is well known, renders the tree more liable; and hence on a good, dry soil of medium fertility, that shall prevent an excessive growth, but favor a healthy ripening of the wood of the shoots, the trees will be more likely to escape.

Crops in New-Hampshire---Winter Protection of Peach Trees.

From farmers of various sections of the county we learn that the corn crop is much better than expected during the dry spell of July. Late planted potatoes are giving a fair yield of very large sized, but rather misshapen tubers. The grain crop, upon the whole, is below an average of former years. A fair crop of fair apples in the valleys, but a light yield on the hills and high lands. As yet we have but one frost, and that a very slight one, doing no damage worthy of note. The Isabella and other varieties of grapes have ripened better than in previous years. Plums have been but little injured by the curculio. The wood of peach trees here suffered very little from the cold of last winter, and in many instances there has been a fair crop of fruit upon the unprotected trees. In my own grounds, where the branches of the trees were confined to the ground by hooked wooden pins, I have had a goodly crop of fine peaches. The branches protected by the snow last winter blossomed and ripened the fruit from six to ten days earlier than on trees not protected. Five years experience warrants me in saying that if the peach trees are properly trained and protected during our cold northern winters, peaches can be as safely and surely grown here as corn or potatoes can.

Superphosphate of lime has been largely and successfully used by our farmers for the past two or three years; but it is an expensive manure at about $65 per ton. Abiel Chandler of Concord, a very successful farmer, (and writer for the Co. GENT.,) manufactures for his own use at a much less cost than he can purchase, and when prepared he knows that it is the real simon pure. I saw in his grounds an experiment in the use of it, on his Swedish turnips. The land was a light sandy soil. The rows having an application of this "home-made" produced a fine crop of large, fair bulbs, four or more inches in diameter, while those in the intermediate drills, having no phosphate, were about the size of butter-nuts, scarcely worth harvesting. Somehow, superphosphate seems to be one of the most needful manures for the turnip plant. Mr. Chandler will soon furnish for the columns of the Co. GENT. the "*modus operandi*" of manufacturing superphosphate, as practiced by him.

Warner, N. H., Oct. 1st, 1864. LEVI BARTLETT.

WESTERN FRUIT DRY-HOUSE

A dry-house is generally located on a sloping piece of ground, and should be placed in such a situation that if it takes fire it may burn down without any other mischief than the loss of the house. With this danger in view, no unnecessary expense is put upon a dry-house; they are built of rough lumber, but at the same time sound, clear and well seasoned, that the building may be as tight as possible. White oak lumber is preferred, as less affected by changes of weather than poplar, and less likely to fire from intense heat than either pine or poplar. Many persons build their dry-houses too large, scattering the heat over an extended and useless surface, for 6 by 9 feet is as much as most families will wish to fill daily for any length of time. With us there is no money in selling dried fruit, when green apples will bring one dollar per bushel, and peaches from two to three dollars; so I take it for granted all the farmer wishes is a good dry-house sufficient to dry for family use, without involving him in the expense of hired labor. Take good sized apples, and five bushels will make four bushels of pared, quartered and cored apples, ready for drying, which will fill a house 6 by 9 feet, and make, when dried, one and a half bushels.

In building a dry-house the flue is prepared first; dig your trench ten feet long, wall with brick, slate or stone that will not crack from heat; let the flue be, when walled, 18 inches wide and 12 inches deep; cover with iron plates—anything will answer from boiler iron up to two inch plates—use whatever you can most readily command; while the boiler iron would be the first to heat, the thicker plates would better retain the heat; but whatever size you use be careful to close all joints with lime mortar or cement of some kind, so that neither smoke or flame can penetrate the interior of your house.

Having your flue ready, put up your buiiding on oak sills, with the flue in the centre; use 2 by 3 oak scantling for studding; place them 33⅓ inches apart—this gives you three drawers to the tier, and makes them of equal size if you keep your building square; let your bottom course of drawers be 24 inches above the iron plates—12 inches above insert your second course, and let the third course be the same height above the second; this gives eighteen drawers, nine to each side of your house. Do not make the opening for your drawers too wide; four inches is enough; nail oak pieces 1 by 3 inches across your house for the drawers to rest upon; nail in between these drawer slides an oak scantling 2 by 3 inches, rising one inch above the sides; this will keep your drawers always straight. Cover your drawers with a board 1 by 6 inches; this may rest on three spikes and be held in place by draw pins. Make your upper floor, indeed your whole house, as tight as may be; as soon as it becomes heated it will be open enough to carry off all the moisture from the drying fruit.

In securing the ends of your house, build a brick wall over the mouth of the flue three feet high; above that you can use boards safely, provided your flue draws; in the rear end build a wall from the flue to the floor, leaving the gable ends open. You will regulate your draft by the height and size of your chimney. Your flue will draw well with a chimney three feet high, though many carry them above the house. Do not make your drawers too large nor too heavy. If you have your house 6 by 9, the drawers should be 33⅓ inches long, 25 inches wide and 3 inches deep; this leaves an open space of 22 inches between the drawers and immediately over the flue.

Take poplar, 1 by 3 inches, for your drawer frames; use hard wood if you have it, for the bottom slats—seasoned hickory is good, oak or poplar will answer, pines will not; they would give their pungent taste to the drying fruit. Let your bottom slats be from 2 to 3 inches wide, and thin, say one-quarter or three-eighths of an inch; nail close together; they will open sufficiently from the heat of the house.

To dry fruit well, let the house be heated before the drawers are filled, and if you wish to economize time and fuel, keep your fires well up until your fruit is dry. But your attention will be necessary, your drawers will not dry exactly alike, some would be burnt up before others would be dry enough to take out. A little experience will enable any one to manage this completely.

Again, if you wish good dried fruit—either apples or peaches,—you must have good fruit to work with. Your apples should be of good size; cook well, and in these days of high-priced sugar, not too sour. Clings make the best dried peaches. You need not peal them; let them be ripe, and a little practice will enable you to cut them from the stone without material loss. The larger the peaches the better, so they are rich and sweet. Plums, cherries, quinces, and pears, dry readily, if you do not put up all you wish air-tight.

There is great difficulty in keeping sugar corn sweet and fresh; with a good dry-house, this may be managed admirably. Boil the corn upon the cob, slice it down fine, spread it thin on old muslin or old newspapers, (I do not take any myself that would poison the corn; let others look out for themselves;) and it will soon dry. Examine your drawers while drying, keep the corn spread out, and be careful not to scorch it.

All are, of course, provided with a good apple-parer. The coring must be done by hand, and all the core removed, if you expect your fruit to be in good order. I have never yet seen a coring-machine work well; there is too much difference in the size of apple cores for one machine to operate well on all kinds of fruit. All fruit must be placed in the drawers upon the back. After being half dried two drawers may be poured into one, if you wish to economize your fuel, by filling half your drawers with fresh fruit.

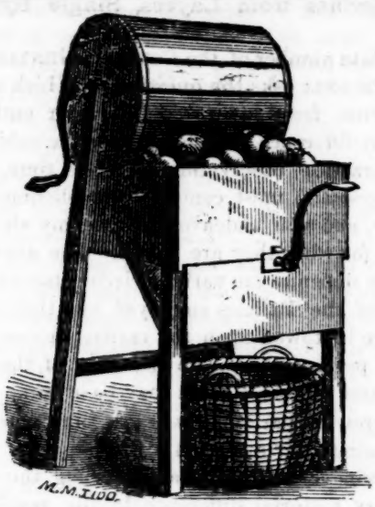
Having your dry-house in good order, and giving proper attention, your fruit will be well dried in 24 hours.

Last summer a Kentucky correspondent of the COUNTRY GENTLEMAN gave a description of a dry-house that no doubt works well. His article was perhaps published early in September: I cannot give the number, as my copy of the GENTLEMAN is in the binder's hands.* There could be but one serious objection to his plan, the house was too large for the farmer's use, unless it should be in a locality so far from market that the fruit would be available only in a dried state. BUCKEYE.

Southern Ohio, Sept. 20, 1864.

Gouverneur Town Fair.—Our Town Fair, which you addressed last year, came off this week, and though the weather (for the first time since our commencement) was partially unfavorable, it proved a success. We had the usual amount exhibited in each department—not large, but of excellent quality. Our horses and cattle cannot be beat, especially our horses. The plowing match was larger and well attended. Floral Hall, as usual, was neatly decorated and filled with domestic manufactures, works of art, bright boquets of flowers, and the "poetry of human beings," all of which made a fine display. Our ladies added a victualing department for the benefit of the Sanitary Commission. G. W. Bungay delivered the address, which was well received, and all, except the trotting, went off satisfactorily. Our whole receipts were about $1,400, $350 of which goes to the Sanitary Commission. J. E. NORTON, *Treas.*

* See Cultivator for Oct. 1863, p. 310.



NUTTING'S CLEANING ROOT CUTTER.

EDITORS CO. GENT.—While attending the recent Fair at Springfield with some of my curiosities, I was pleased to hear so many say "that's Nutting's Fan Mill, and this is his Cleaning Root Cutter, that we saw noticed in the CO. GENT.;" and one man "took me to do" severely for not always signing my real name to communications in the papers, and after laboring with me some time, left, saying he should depend upon seeing something over my own name soon. Thinking that I shall at least please one of your faithful readers, I send you the following brief description of *Nutting's Cleaning Root Cutter*, a sample of which is now in the N. Y. State Agricultural Rooms at Albany.

From the cut it will be seen that it is very simple and cheap in construction, with no cog-gear, belts or other fixtures to be out of order, and from some five years use without the least required repair for sharpening cutters or otherwise, it proves to be very *durable*, and I believe with reasonable care it will "last a lifetime."

It is not only superior to all other root cutters in fineness, *ease and capacity* of operation, *durability and cheapness*, but it is the *only one* capable of *cleaning* the roots before cutting. In one minute it takes from one to three *quarts of dirt* from a bushel of turnips or carrots; it will cut a bushel of potatoes in thirty to sixty seconds, (and other roots and pumpkins in proportion,) fine enough for sheep, lambs, swine, poultry, cattle, calves, colts or horses. Roots prepared with it for *boiling*, cook in a *fourth the time*, with a *fourth the fuel*, and are worth a *third more* than if cooked whole, "*dirt and all.*" The Cleaner is excellent for *sprouting potatoes* in the spring for family use.

There can be no doubt in the minds of candid, considerate and humane men, of the importance of *cleaning* vegetables before feeding them to any kind of farm stock. Sore teeth and throat, and more or less internal irritation and inflammation, to such an extent as to prevent *thrift*, if nothing worse, often result from feeding dirty roots to stock. It is impossible for such a mechanical irritant as the dirt or gravel on roots to pass through the very sensitive parts of the throat, stomach and bowels of quadrupeds without injury.

The importance of *finely* cutting, (or *grating* roots, as in European countries,) either to feed separately or mixed with meal, grain or cut feed, or to cook, has not been duly considered, in order to get the full benefit of the roots and avoid all danger of *choking* the stock eating them.

Randolph, Vt. RUFUS NUTTING.

THE ITALIAN BEE.

MESSRS. EDITORS—I noticed in the CO. GENT. of Sept. 16th, an article on the Italian bee, by L. L. FAIRCHILD.

With the four years experience I have had, I find the statements in regard to their superiority over the black bee, corroborated. I think no one that has this species of bees, and are close observers, would question for a moment their superiority. I know the statements to be true that are made by Rev. L. L. Langstroth, in regard to the prolificness of the queens, and their indisposition to rob, and their determined resolution to defend their hives when attacked by robbers; also of their peaceableness and quietness of manner, while among them or handling their combs.

Below I give you the facts of two colonies, to show their great prolificness and industry. The spring of 1862 I had one very small colony. I will guarantee the bees could all have been put into a pint cup. This swarm began to increase as the weather grew warmer. The 2d of July a large swarm issued, which I hived. From this and the mother colony I took nearly 50 pounds of box honey.

This season I have one colony which I transferred last April from a common to a movable comb hive, from which I have taken 100 pounds of honey, leaving an ample supply for winter stores. The most of this honey was gathered before the first of July. I think I should have received a much larger quantity if the swarm had wintered in the new hive, and also if the season had not been so unusually dry, which shortened the honey harvest materially.

There were 56 pounds of this honey stored in one box, which I sold for $19. C. B. BIGLOW. *Perkinsville, Vt.*

AMERICAN POMOLOGICAL SOCIETY.

At the late meeting of this Society at Rochester, the following officers and committees were appointed:

President—MARSHALL P. WILDER, Massachusetts.

Vice-Presidents—J. A. Warder, Ohio; J. S. Cabot, Mass.; E. C. Worcester, Vt.; C. Downing, New-York; Wm. Parry, New-Jersey; R. Buist, Penn.; Edward Tatnall, Delaware; Lawrence Young, Kentucky; William Bort, Michigan; I. D. G. Nelson, Indiana; D. B. Wier, Illinois, B. F. Edwards, Missouri; Silas Moore, Rhode Island; Yardley Taylor, Virginia; E. F. Curtis, Wis.; R. T. Perkins, California; William Saunders, District of Columbia; E. W. Beadle, Canada West; N. A. Bacon, Connecticut; R. Peters, Georgia; W. C. Wilson, Md.

Treasurer—Thomas P. James, Pa.

Secretary—James Vick, N. Y.

Executive Committee—J. J. Howe, Conn.; M. B. Bateham, Ohio; J. G. Bergen, New-York; J. E. Mitchell, Philadelphia; W. C. Flagg, Illinois.

General Fruit Committee—P. Barry, Rochester, N. Y., Chairman; J. W. Adams, Maine; Eben Wight, Mass.; J. H. Bourne, Rhode Island; D. S. Dewey, Conn.; E. C. Worcester, Vt.; W. B. Smith, N. Y.; Dr. Trimble, N. J.; A. W. Harrison, Pa.; Ed. Tatnall, Delaware; J. S. Dowher, Ky.; G. W. Campbell, Ohio; G. M. Beeler, Indiana; M. L. Dunlap, Illinois; Wm. Muir, Missouri; T. T. Lyon, Mich.; Joshua Pierce, District of Columbia; Charles Arnold, Canada West.

Com. on Foreign Fruits—C. M. Hovey, Mass; M. B. Bateham, Ohio; R. Buist, Pa.; Geo. Ellwanger, N. Y.; H. E. Hooker, N. Y.; D. S. Dewey, Conn.

Com. on Synonyms and Rejected Fruits—J. S. Cabot, Mass.; S. B. Parsons, N. Y.; I. D. G. Nelson, Ind.; J. A. Warder, Ohio; J. J. Thomas, N. Y.; R. Buist, Pa.; C. M. Hovey, Mass.

Com. on Fruits on Exhibition—E. W. Herendeen, W. B. Smith, and E. P. Taft.

Special Com. on Revision of Catalogue—P. Barry, J. S. Cabot, J. A. Warder, Chas. Downing, C. M. Hovey, F. K. Phœnix, F. R. Elliott, J. J. Thomas, M. L. Dunlap, President Wilder, *ex officio*.

Com. on new Native Fruits—C. Downing, C. M. Hovey, R. Buist, J. A. Warder, P. Barry, D. Coit, S. O. Knapp, F. R. Elliott.

OUGHT FARMERS TO LABOR?

This subject is just broached in the Rural New Yorker by L. L. F.,* who has handled it so well that it may not be amiss to repeat a few of his assertions: "Farmers have brains as well as muscles, and the exercise of the former is quite as necessary to success in their profession as the latter. Many, perhaps the mass of our farmers exert their muscles at the expense of their brains. Now who is the most successful? Is it the intelligent, wide-awake man, who keeps posted up with the times, or is it the hard-working, manual labor man? The man who makes it his business to be constantly delving on his farm, is likely to lose much more than he will gain." To corroborate the above it is only necessary to look around and see who are the prosperous men of the day. Notice who wins the premiums at the Fairs, and find if they are men who work with their laborers from light till dark. The best farmers in England rent land from the aristocracy, paying more for it per annum than would buy the same quantity and quality here. Do they labor with their hands? They oftener ride on horseback than walk round to their workmen, and attend all the weekly grain markets and monthly cattle fairs, even when they may not want to buy or sell, for the sake of keeping a clear knowledge of what prices are being obtained. They also indulge in field sports. The tenant joining in the chase is frequently seen to pass his landlord, and go by every lord, earl and duke in the field, his horse, perhaps of his own raising, taking leaps which daunts the courage of some of the nobles, mounted on three or four thousand dollar hunters. He will take more premiums at the Great Agricultural Exhibitions than the land-owners, and rise after dinner and argue for liberal leases and the justice of the landlords assisting to make permanent improvements, &c. Compare the pale faced, spare fleshed American farmer with the rubicund countenance and jolly bearing of the English one. Do here, as there—employ more capital, keep more live stock, crop the land continually, for with sheep and turnip husbandry, and a systematic course of cultivation and rotation cropping, no fallows, no idle land, and none exhausted will exist, as with plenty of animals to consume and make dung, the more the land is cropped the more there is to go back on it again, the larger and heavier the produce is, and consequently the richer the soil becomes. Work and slave, indeed, for a living!—little if any better than the man who owns no land What is the use of owning property if it is not enjoyed? and what is the reason brains are not to benefit their owner, when by exercising them he can make double the amount he ever did when by over exertion of his body he clouded his mind? Any man with a clear head can direct every operation on a farm, without working himself, by employing a good plowman as teamster, a good shepherd and a good cowman, and no man can do all things well by changing his men continually and taking casual help. Let workmen each attend to their department, and they will take pride in it, but no man ought to have a manager unless he lets him manage, and engages one who has some brains not entirely numbed by ignorance and drudgery. Let *farmers* manage themselves; let *gentlemen* have managers.

J. B.

Grapevines from Layers, Single Eyes, and Cuttings.

In a late number of the COUNTRY GENTLEMAN, Mr. F. K. PHŒNIX asks the question, "Which makes the better vine, from layer, single eye, or cutting, or is there no difference?" I have made the subject a matter of practical observation for some time, in one of the largest and most complete establishments in the country, and will endeavor to give my views on the subject for what they are worth. The answer to the question depends on various circumstances: the perfection of the facilities employed, and the intelligence and care bestowed upon the various modes in the details of propagation. The discussion of the subject in its various aspects, I think may be of some interest to grape-growers, particularly at this time, when so many are turning their attention to the subject.

In a vineyard of ten years standing there may not be a very material difference in the result between vines propagated in the best manner, whether by layers or by single eyes, both receiving thorough and careful cultivation. A well grown layer may succeed in the vineyard *under semi-neglect*, better than a well grown plant from a single eye, because the layer is larger and somewhat more substantial at the time of planting than a single eye plant of the best quality. But I believe the most experienced cultivators, who prepare their ground thoroughly and bestow all necessary care in planting and cultivation, will give the preference to the well grown single eye plants, because such a plant is the more perfect in itself; starting from a single germ, its development is uniform and perfect, making roots in abundance, compact and uniform, giving the plant all the essential qualities and characteristics of a well grown seedling of more mature age. In producing plants by layers, the process may be regarded as somewhat more *artificial*. The layer plant derives much of its support from the parent vine, and almost exclusively from it during the first weeks of its existence. The roots are few and extended in length, and when the plant is separated from the vine its chief source of its former support is cut off, destroying, at least for a time, some measure of the *balance of power* or vital force of the plant. This, however, is regulated in some measure in cutting back the plant at the time of planting.

Plants from cuttings are usually started and grown in the open air, and generally contain three or more eyes, because shorter cuttings would not reach uniformly moist soil sufficiently to insure their growth. These usually start late, and are subject to the casualties of the season, and therefore make but little growth the first summer. Some varieties however, like the Concord, Iona, &c., take root more readily, and make a better growth than some other kinds. The Delaware and Allen's Hybrid are the most difficult to make root in the open ground, and but few persons resort to that method of multiplying them. Vineyards established from cuttings, from free growing kinds, require two years at least more time to bring them into bearing, than when planted with good single eye plants or layers.

I have based my remarks upon *perfectly grown single eye and layer plants*. But of single eye plants of this character comparatively few are grown; indeed I know of but few propagators who attempt to grow

them at all, so that the proportion of this class that are offered in market, compared with those of low grades, is very small. The propagation of native vines from single eyes, that is, with artificial heat, is comparatively a new business in this country. It was the discovery of the superior excellence of the Delaware grape, and the fact that it was extremely difficult to propagate in the open air, that led to the introduction of this mode of propagation.

A clear understanding of the comparative value of the various grades of plants, as now grown by different propagators, cannot be given to those not familiar with the subject, without some allusion to the various processes employed in propagation. And this is the more important to the public just now, as the demand for vines, and the unfavorable season just passed, will cause a vast number of very inferior plants to be offered in the market.

The first requisite for the production of perfect vines, is good, sound, well ripened wood,—not that which has been taxed with the production of a full crop of grapes, but wood from which the fruit has been removed at the time of or soon after blossoming. From the time the eyes are set, to the maturity of the plants, the essential conditions of perfect growth and maturity must be closely observed; and these conditions are, a due degree of heat, moisture, and air, at all times. The Delaware, of all other varieties, is the most reluctant to strike root. The wood is hard, firm, and close grained. The plants will generally make a growth of two inches before the roots begin to start, even with a bottom heat several degrees greater than the atmosphere above. As soon as the roots have attained a length of two or three inches in the propagating sand, the plants are transferred to small pots, where they remain until the roots have generally extended to the sides of the pots, when they are again transferred to pots of a larger size. These changes continue, with a close and constant observance of the due degrees of temperature, constant and careful watering, and ventilation, until the plants have been six times tranferred to larger pots; the last being what is called ten inch size. If there is any neglect in making the changes of pots at the proper time, or any irregularity in giving daily the requisite supply of water, the roots are liable to die at the sides of the pots, and the plants consequently sustain a serious check. After a proper time the plants are removed from the hot-houses to glass structures, without artificial heat, where they remain to the close of the growing season. It is the impression of some, that plants thus grown and protected from the changes of the outside weather, are immature and tender, and not so well able subsequently to withstand the vicissitudes of the open air as those not thus protected. But this is a mistake. In the hands of the intelligent propagator, the maturity of the roots and wood may be regulated at will, and far more perfect plants are produced than it is possible to grow in the open air. They are exposed to none of the sudden changes of weather, and the growth is regular, continuous, and perfect. Such plants are well supplied with a compact mass of well ripened fibrous roots, and will be found equal, at least, to the best plants grown from layers.

The propagating season generally commences by the middle of February, and is continued to the fore part of May. The last started are those that are to be retained under glass through the season, and produce the plants just described. Those started first are transferred to cold houses, where they go through the hardening process preparatory to being set in the open ground, and after being set in the open ground they are generally protected with a covering of glass for a time.

Those plants grown exclusively under glass are necessarily expensive, costing probably three or four times as much as those that are soon set in the open ground. All plants, whether grown in doors or in the nursery outside, are staked and regularly tied up as often as their growth requires it.

I have thus described the method of growing first class plants, as well as those of the lower grades, in a well conducted establishment. These lower grade plants vary in strength and value, according to the time which they are started and other circumstances of treatment. But the great majority of persons who have engaged in the business pursue a very different course. The largest possible number of plants are grown with the appliances at hand. The plants are started with bottom heat, and are very closely crowded while in the house, many of which are necessarily removed to the open ground to give room for others before the warm weather is established, where they are closely set, and never staked, but are permitted to cover the ground like so many field peas. Here they make at best but feeble growth during the remainder of the season, and particularly the past dry summer. The staking and tying of plants is a very important consideration, and should not be neglected, even though some of the largest growers number their plants by hundreds of thousands, and require as many stakes for them. Any one familiar with the character and growth of the vine, well knows that a branch that can find support in the top of a tree will make a growth of three times the length in a single season that one will that has no support.

I think I have faithfully described the character of the plants that are now grown in this country, and Mr. Phœnix, and the readers of the COUNTRY GENTLEMAN generally, can form some idea of the variable character of the plants that are now grown, and of their comparative value. But the quality of the plants that are grown from layers is but little less variable, owing to the manner in which they are grown. The object of some propagators is to make the greatest possible number of plants from a single vine, not only employing too many canes, but aim to make a plant from every joint; others, desiring to make a better class of plants, remove each alternate shoot. But even this is too heavy a tax upon the parent vine, and the plants produced must necessarily be weak and poorly rooted. To make strong plants from layers, and still maintain the health and vigor of the old vine, not more than two or three canes should be laid from a single vine. The length of these may be according to the strength of the cane, and not more than from *three* to *five* plants should be suffered to grow from a single cane—all intermediate buds should be removed. Taking the largest number, five from a cane, and three canes to a plant, will give fifteen plants from a vine. With good culture and careful training, staking and tying, these may be made good, strong well rooted plants, and will compare favorably in their results with the best quality of single eye plants.

There is no kind of nursery stock that varies so much in quality as grape-vines as now grown, and the reason of this is clear, from what I have stated in regard to the practice of different propagators. In growing fruit trees, for instance, the same process is understood and practiced by all, and hence there is more perfect uniformity in the character of the trees sold.

H. P. B.

P. S.—Since the foregoing was written I have received the Co. GENT. of 6th October, in which a correspondent, alluding to a former article on the vine, makes the request that I would communicate something more on the subject, embracing propagation from single eyes, root pruning, &c. I will endeavor to meet his wishes at an early day. H. P. B.

Provincial Exhibition of Canada West.

The Provincial Agricultural Association of Upper Canada held its Exhibition last month at the city of Hamilton—in the midst, as our readers are aware, of some of the best farming lands in the Western Province, and in a district where a number of the finest herds and flocks on the continent are to be found. We had therefore entertained high anticipations as to the character of the Show, and they were not disappointed in the result.

In its extent, in some classes at least, the display has been rarely equalled here, and perhaps never exceeded. Its strong points were the classes of Cattle and Long-Wooled Sheep, and, as compared with the exhibitions of our State, in Grains and Roots. The show of Horses was large, but, with the exception possibly of those for draught, from our limited observation we should scarcely rank it as superior. Implements and machinery were well represented. The attendance on Wednesday, which was a fine day, was very good, but on Thursday, unfortunately, there came up a driving storm which for several hours rendered the open field almost a sheet of water, and the only tenantable place then was the admirable Exhibition Building—a structure of large size, accommodating all the in-door departments, such as flowers and fruits, household goods, musical instruments, seeds, etc., and proving of great value in unfavorable weather, as it is an ornament to the grounds and a most commodious receptacle for fragile articles at any time. The season for Fruit has not been a good one, and making due allowance on this score, the turn-out was very creditable to the nurserymen and orchardists of the Province.

In the display of *Short-Horns* of course the great feature was the last importation of Hon. DAVID CHRISTIE, Brantford, from the herd of Mr. Douglas, Athelstaneford. The stalls of the three cows, "The Queen" and "The Pride" of Athelstane, and "Placida," were constantly crowded, and when they came out before the the judges there was a hum of admiration around the ring of spectators. "Aw, did ye iver see the like o' that, noo?" and "What do you think of old England—we can't get our stock up like that here," were samples of the remarks of a pair of burly, well-to-do farmers at our side, as they were led into view; and no wonder, for the "getting up" of animals for show is something never attempted on this side the water on the scale common among English breeders, and even at home Mr. Douglas has few rivals in this respect. Beyond their very high condition, however, they must be an addition of great value to the stock of this continent; and in one respect particularly they were in contrast to some of the Short-Horns often exhibited,—carrying their broad, deep, compact and symmetrical frames within a short distance of the ground, and, so long as the breed was not instituted for racing purposes, one never cares to see too high a sky-line between the legs. As we hope to give hereafter a portrait of the "Queen of Athelstane," which led off in her class, with the "Pride" as second, we defer farther remark for the present. "Placida" came into the next class (three-year olds,) and it would require a closer examination than ours to determine whether she might not challenge the laurels of the "Queen" herself with fair prospect of success.

Among the bulls, we are happy to note that the first prize in his class was given to "Oxford Lad," owned by Christie & Cowan, Brantford, and purchased by them last year from the herd of J. O. SHELDON, Esq., of Geneva, by whom he was bred. And the first prize on yearling bulls was taken by a calf of his siring, also bred by Mr. Sheldon, and purchased last summer by Messrs. J. & J. White, Halton, C. W.; he is called "Butterfly 2d," and his dam was Miss Butterfly, imported by Mr. S. from the herd of Col. Townley. His age is about a year and ten months, we believe, and when the bulls of all ages came out for the decision of the sweepstakes, he carried off the palm, even against his sire.* The labors of the Short-Horn Committee were by no means light. As the several classes came before them, each in turn seemed worthy of a "Special Commendation" in their report, and it was found, in the end, impossible to discriminate where all were so good, and this well-deserved compliment was therefore paid to the whole display throughout. Among other leading exhibitors were F. W. STONE, Moreton Lodge, Guelph, JOHN SNELL, Edmonton, W. A. COOLEY, Ancaster, and others of high reputation on both sides the lines, over whose excellent contributions we regret we cannot linger here, as we did upon the grounds. The number of Short-Horns entered was 142.

The exhibition of *Devons* was also good, although not as pre-eminently superior. John Pincombe, London, received the sweepstakes diploma for a very good bull, which was also first in his class, and a number of other leading prizes. We have not seen the complete list of awards in this breed, and took no notes of several other prominent exhibitors whose names must have appeared in it. The Devons entered numbered 140—almost as many as the Short-Horns. The *Ayrshires* were fairly represented, our friend Col. R. L. Denison, Treasurer of the Society, showing some very pretty samples of the breed. There were 69 entries, from quite a large number of different herds—a list too long to give in full, and from which we cannot fairly particularize. The display of *Galloways* was also large (71 entries), but of *Angus* cattle the entries were only 12, and none of those were present. In the former, Mr. Snell of Edmonton took the sweepstakes diploma and several prizes. F. W. Stone, Guelph, had a fine display from his herd of *Herefords*, imported and of his own breeding, and they appeared to great advantage and would have delighted those with whom they are especial favorites.

Of Sheep, the entries aside from Fat Sheep were as follows, though all may not have been present:

Leicesters,	240	Cheviots,	29
Cotswolds,	99	Other pure bred Medium Wools,	25
Other pure bred Long-Wools,	82	Spanish Merinos,	74
South-Downs,	115	French do.	67
Shropshire-Downs,	17	Other Fine-Wooled,	18

Of course among so many our notice must be very general, and it seems almost invidious to mention names. John Snell, Edmonton, in Leicesters and Cotswolds, Geo. Miller, Markham, in Cotswolds and other Long-

* It may be proper to mention that although Mr. Sheldon was on the Committee of Judges—five in number—he of course took no part in the examination or decision in classes including competition from stock of his breeding, and the other four members of the committee were gentlemen to whose judgment the very highest deference must be paid.

Wools, and in Shropshires, Cheviots, and other Middle-Wools, F. W. Stone, Guelph, in Cotswolds and South-Downs, J. and J. White, Halton, in Leicesters, were among those to whose pens we devoted the most time; and it must be candidly owned that in no part of the exhibition could so unfavorable comparisons be drawn as regards our own at Rochester, the previous week, as in this of Mutton-producing sheep. What South-Downs were exhibited at our State Fair certainly need shrink from no challenge; but in *extent* there was nothing like the turn-out at Hamilton, and of Leicesters, Cotswolds, etc., we hardly had proof that such breeds are known among us. It is true that our show of Fine-Wooled Sheep was much the better of the two, but it scarcely speaks well for the condition of our agriculture or the enterprise of our farmers, that Mutton sheep are neglected here as they are. The difference in value, between coarse or "middle" and fine wool, was never proportionately as small as at the present time, and allowing to the Merinos all the superiority they undoubtedly possess for certain localities, we cannot but think many parts of our State quite as well suited to the Long and Middle Wooled breeds as Canada West. It seemed really a disgrace to be obliged to confess, in the presence of four or five hundred head of Long-Wooled sheep alone at Hamilton, that we might have counted on our fingers all that the State of New-York could muster to send to Rochester; and with the great encouragement that now exists for breeding them and the Downs, we sincerely trust that our farmers may take a lesson from their Canada brethren as regards both, and that our State exhibitions may hereafter afford evidence of a general awakening on what must be considered a most important branch of good farming in any country.

The exhibition of *Swine* included a better display of improved Berkshires than we have seen in a long time, besides a fair representation of other breeds.

To show the extent of the exhibition of Seed Grains, we may mention that there were 17 entries for the Canada Company's prize for the best 25 bushels winter wheat, 41 for the prizes for the best two bushels white winter wheat, 13 for the best two bushels red winter wheat, 21 for same quantity Fife spring wheat, 10 for club spring wheat, and 11 for spring wheat of any other sort.

The Plowing Match we did not see, but the liberality of the prizes drew out no less than *fifty-three* competitors. The first premium was a combined reaper and mower, presented by a manufacturer for the purpose, value $150; the second, the iron plow taking the first prize in the exhibition, value $40; the third, the first prize wooden plow, and the fourth a set of harrows.

It may be remembered that a summer trial of Reapers and Mowers was held by the Association, the awards at which were to be announced last week. They proved to be as follows:—

Single Mowers—Seven Entries—Four Competing—Prizes:

1. Ohio Junior, James Hall, Oshawa, C. W.
2. Hubbard Mower, Billington & Forsyth, Dundas, C. W.
3. Wood's Mower, J. Watson, Ayr, C. W.

Single Reapers—Eight Entries—Six Competing—Prizes:

1. Ayr Reaper, J. Watson, Ayr.
2. Billington & Forsyth, Dundas—name of patent not given.
3. Brinckerhoff's Self-Raker, James Hall, Oshawa.

Combined Reapers & Mowers—Fifteen Entries—Ten tested as Reapers and twelve as Mowers—Prizes:—

1. Ball's Ohio, L. & P. Sawyer, Hamilton.
2. do. James Hall, Oshawa.
3. do. with self-raking attachment, Palmer & Grant, Grimsby.

Commended—Excelsior, James Scott & Co., Dundas.

Among articles shown by American exhibitors were the Cheese Vats of O'Neil & Co., and W. Ralph, both of Utica, which seemed to attract much attention. We may mention in passing that our Canada friends do not yet adopt the system which our State Society has now been following for several years, of opening competition to all exhibitors, wherever their residence.

We cannot conclude without again congratulating the farmers of the Upper Province upon the excellent management and encouraging success of their Society, and we should be equally remiss in not tendering the thanks of the New-York delegation,—which included the President, J. O. SHELDON, Esq., and Messrs. Thos. Richardson, T. C. Peters, Samuel Faile, J. R. Page, and the Treasurer,—to the officers of the Canadian Association, particularly to President JOHNSON of London, Secretary Thomson, and Treasurer Denison, for a very kind greeting and many welcome attentions.

HYBRIDIZING GRAPES.

MESSRS. CO. GENT.—In all the experiments of hybridizing grapes, why does not somebody start from the very hardiest northern sorts as a base?

It is a fact there are native sorts and vines without number all over the north that care no more for any degree of cold every experienced by them than the oaks or maples—while on the other hand, it is equally true that none of the new cultivated sorts except possibly the Clinton, will endure such winters as the last one without serious damage. Of course those who attend to these thing as a business, can, and perhaps will hereafter, take down our vines in autumn, but thousands will not, and for the extremes of the northwest a series of more hardy sorts is demanded, and would be a great boon. Would it not then be a *sensible* thing to use these gloriously hardy natives in hybridizing? In that way too, I am sure we can get perfectly clear of the foxy flavor and habit of dropping from the bunch, which characterizes so many of the now current sorts, for these wild varieties usually have neither of these undesirable peculiarities.

Several friends have asked me if the Kirtland Raspberry differed from the Allen. On this point I give the testimony of a valued correspondent in northern Illinois:

"The Kirtland is quite distinct from the Allen. It is the only raspberry that stood unprotected with us last winter without killing. The fruit is not large, but it is a good color and flavor, and a good bearer—the best I know of among that class of raspberries. It suckers very much, and of course bears better when the suckers are cut away. On the whole it resembles the variety known as the Cincinnati Red Antwerp more than the Allen."

Another point he treats of in his letter—moving small evergreens in the fall:

"We are now transplanting a bed of two year old Norway Spruce. They will root considerably this fall. We will mulch with straw or prairie hay over winter. They will do very well in this way, as I know from personal experience."

Bloomington, Ill., Sept. 13, 1864. F. K. PHŒNIX.

Flowering Bulbs for Autumn Planting.

The Hyacinth.

The Hyacinth is one of the most beautiful, and altogether the most delicate and fragrant, of all the Bulbous Flowers; and is therefore exceedingly popular.

Hyacinths should be planted in October and November. Make the soil deep, mellow, and tolerably rich, and see that the water has a chance to drain off. The beds should be narrow, so that all parts can be reached from the alleys or walks. Set the bulbs about six inches apart and four deep. Before winter sets in, cover the beds with leaves or the straw from the manure heap, to help keep out the frost. This should be removed as soon as hard frosts are over—in this latitude, the latter part of March.

Hyacinths will commence flowering in April and continue about a month. Flowers may be cut freely, without injury to the bulbs. Indeed, all flower stalks should be removed as soon as the flowers have faded. In about five or six weeks after flowering, and when the leaves are becoming yellow, the bulbs may be taken up, dried, and packed away in paper-bags or boxes, for planting again in the fall. If the beds are needed for other flowers, as is generally the case, the bulbs may be removed in about three weeks after the flowers have faded. In this case, after removing all the flower stems, if this has not been done before, lay the bulbs on a dry bed in the garden, and cover them with a little earth. Here they can remain until the leaves have ripened, when they are ready to be packed away for fall planting.

Double Hyacinth.

Many persons, not well acquainted with this flower, think that only the double varieties are desirable. This is not so. The value of the Hyacinth depends principally upon the form of the spike and the arrangement of the flowers or bells upon the flower-stem. The truss or spike of bloom should be pyramidal, and the flowers close enough together to nearly or quite conceal the stalk.

Hyacinths may be flowered in pots and glasses in the house, and they make the most beautiful winter flowers that can be imagined. Nothing can be more delightful, either for beauty or fragrance. From one to four bulbs may be planted in a pot, according to its size. Cover only the lower half of the bulbs with soil, press them down until they are about two-thirds covered, then water until the soil is moistened thoroughly, and then set the pots in a cool, dark cellar. The roots will form, with but little growth of top. Here they may remain for several weeks, and a pot or two at a time can be taken into a warm, light room, for flowering, a week or ten days apart, and a succession of flowers obtained during most of the winter. If flowers are desired about the "holidays," plant the bulbs about the first of November.

The Tulip.

For more than a century the Tulip has been a universal favorite with the lovers of flowers, and at certain times the rage for this flower has amounted to a general mania. Nothing in the floral world can exceed the beauty and brilliancy of a bed of good Tulips. Those who are acquainted only with the common, poor Tulips seen in the country, know nothing of the character of a good Tulip, or the magnificence of a mass of these superb flowers.

Perfect Tulip.

Any good garden soil will answer for the Tulip. A rich soil is not necessary, though well rotted manure and rotted sods and leaf-mold, may be applied when the earth is poor. See that the drainage is good before planting. Plant in October and November. Make the soil fine and deep. Set the *early* flowering kinds five or six inches apart, and the *late* varieties seven or eight inches. Cover from two to three inches deep.

The Narcissus.

The Narcissus is a very fine class of early blooming flowers, including the well known Daffodil and Jonquil. Most of the varieties are hardy, and should be planted in the autumn, like the Hyacinth, but may remain in the ground a number of years, after which they will become so matted together as to make a division of the roots necessary. Some of the varieties are double and showy, and the single are delicate and beautiful.

The most beautiful class of the Narcissus family, however, is the Polyanthus Narcissus. The flowers are produced in clusters or trusses of from half a dozen to three times this number. The engraving, which we had taken from a cluster of medium size, shows the habit. Like the others, they show every shade of color, from the purest imaginable white to deep orange; the cup of the white varieties being yellow, and of the yellow sorts orange. These are

not as hardy as the other varieties, but are sufficiently so for culture in this latitude in a well drained soil, if covered before winter with leaves or straw, as recommended for Hyacinths.

Crown Imperials.

The Crown Imperial is far less esteemed than it deserves to be. It flowers in April, the bulb throwing up a vigorous stem three feet in height, producing near the top a crown of beautiful, drooping, bell-shaped flowers. The stem terminates above the crown of flowers in a tuft of glossy green leaves. The engraving, though on a small scale, shows somewhat the character of the flower. There are several varieties, differing mainly in the color of the flowers, as yellow, scarlet, red, orange, &c. The flowers are curious, as at the base of each petal is a cell containing a large drop, which looks likd a fine pearl.

The bulbs are large, and should be planted at least four inches deep and eight or ten inches apart. Once in four or five years they should be taken up and replanted.

Fritillaria.

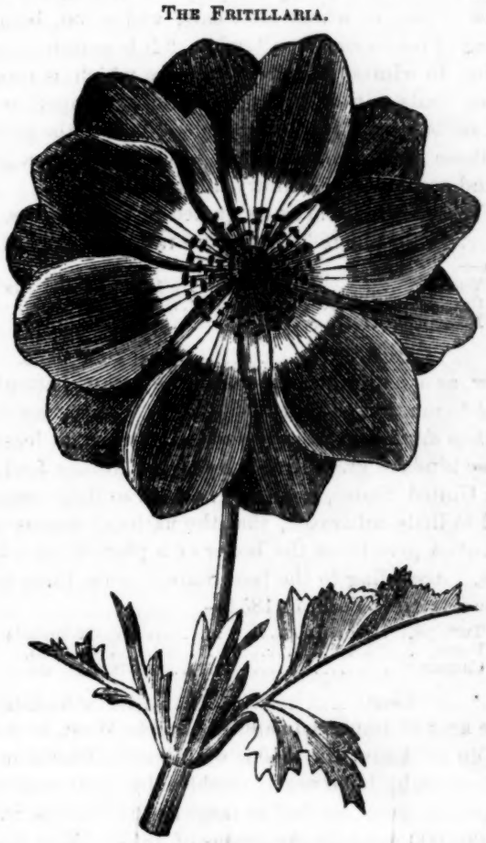
Fritillaria meleagris, or Chequered Lily, is sometimes called the Guinea Hen Flower on account of its chequered or spotted flowers. There are many varieties, differing in color, having various shades of brown, purple, yellow, &c., singularly mottled, each variety having two colors, curiously mottled in squares, as shown in the engraving. The flowers are bell-shaped, on stems about eight inches in height, and bloom in April or May. They look best when a dozen or so are planted in a group. Plant the bulbs about two inches deep and four or five inches apart.

The Persian Fritillaria throws up in May, a stem about three feet in height, the flowers growing around the top of the stem in a pyramidal spike, and are of a purplish color. The bulbs are larger than the preceding, and should be planted about four inches deep, and a foot apart.

The Anemone.

All will admit, who have seen the Anemone in bloom, that it is a most beautiful flower. The colors are exceedingly brilliant, and the markings, stripes, and belts charming. Double and single are both desirable—the single the most brilliant in color. The Anemone has not been grown generally, because it has been thought too tender to bear our winters; but we have never failed of a good show when roots were put out in the autumn in a dry place and covered with leaves. Last spring the show was superb.

THE FRITILLARIA.



THE ANEMONE.

Plant the roots five or six inches apart, and cover about three inches deep. The roots look like ginger root. They flower after the Hyacinth, and continue a long time in bloom. As soon as the leaves begin to turn yellow, the roots may be taken up, dried in the shade, and packed until the next autumn.

A Good Price.—We are informed that Tube Rose 7th, which received the first prize as a two-year old Short-Horn heifer, at the recent show of the New-England Agricultural Society, has been purchased from Paoli Lathrop, Esq., of South Hadley Falls, Mass., for $1,000, by G. T. PLUNKETT of Hinsdale.

Root Culture in Canda West--Rotation of Crops.

In our Notes of the recent Exhibition of the Canadian Association at Hamilton, we adverted to two points which seem worthy of farther remark—the extent with which the Mutton breeds of Sheep are bred and exhibited, and the display of Turnips and Mangolds as farm crops. The former, however, is so closely associated with the latter; the culture of Roots is so important an essential in the keeping of a good flock of sheep, and both, as we believe, are so inseparably connected with *the best farming*,—that it is mainly the experience of Canadian farmers in the production of Roots, which we wish now to refer to at greater length.

We are by no means inclined, for the sake of pointing an argument, to decry the condition of our own agriculture, and unduly exaggerate what is done beyond the lines. But the President of the Association, Col. JOHNSON of London, C. W., in his closing address, adduces some facts that are at least worthy of our attentive consideration. After drawing an interesting comparison between the crops of that Province, and those of several of our States, he shows that great attention is there paid to a proper rotation—"wheat after wheat, or wheat after oats, and so on, being a thing of rare occurrence," while "it is certainly gratifying to witness the great increase which is rapidly being made in the growing of turnips, mangold wurtzel, beets, carrots and other roots. I believe the growth of these roots must form the basis on which a good sound system of husbandry must stand."

From the last census, as quoted in this address, we ascertain that in 1860 there were raised in Upper Canada—

Turnips,	18,206,859	bushels.
Carrots,	1,905,598	do.
Mangolds,	546,971	do.
Total,	20,659,528	do.

Now, as a natural consequence, the greater attention paid to rotation and the raising of roots, *increases rather than diminishes the production of grain*, at least of those kinds of grain in use mainly for human food. In the United States, roots are held in so light esteem, and so little cultivated, that the national census does not even give them the honor of a place in its schedules. According to the last State Census, there were grown in New-York, in 1854—

Turnips,	985,522	bushels
Beets,	7,884	do.
Carrots,	478,277	do.
Total,	1,471,683	bushels.

The area of improved land in Canada West, in 1860, we do not know; in 1850 it was about 3,700,000 acres, and it might have nearly doubled by 1860, and still have only been *one-half* as large as that in this State, (13,600,000 acres by the census of 1855.) Now let us compare the grain production of Canada and New-York in 1860, bearing in mind that the extent of cultivated land must be at least *double* in the latter:

	State of New-York. Bushels.	Upper Canada. Bushels.
Wheat,	8,861,099	24,540,425
Rye,	4,786,905	973,181
Indian Corn,	20,061,048	2,256,290
Oats,	35,175,133	24,220,874
Barley,	4,186,667	2,821,962
	73,070,852	54,812,732
Peas and Beans,	1,609,334	9,650,542
Root crops as above,	1,471,683	20,659,528
	76,151,869	85,122,802

With such a table as this before us, can we rest entirely contented with our present mode of farming? Can we continue to sneer at root crops as we have done in the past, when, with the same obstacles to contend against, and the same course of reasoning in equal force to oppose them, they are still doing so well for the farmers of the neighboring Province? And we cannot forbear calling attention to the fact that, whatever the opposition to the introduction of root crops, when they once fairly obtain a foothold as a farm crop, they appear to grow rapidly in favor. A correspondent at Port Hope, C. W., wrote us last year, (see COUNTRY GENTLEMAN, vol. xxi, p. 241:)

"According to the Census of 1851, there were over 3,000,000 bushels of turnips grown in Upper Canada, and about 182 bushels was the average yield per acre. In the year 1861, the turnip crop had increased to over 18,000,000 bushels; the average per acre had increased to 248 bushels. Although this is but a low average, it is a great improvement in ten years, and probably the average per acre will be doubled by the next census."

Does not this show convincingly that with practice in growing roots comes increased success in the yield obtained, just as with practice in feeding them, comes an increased conviction of their value?

But there is another point to illustrate the more correct basis upon which the farming of Upper Canada is conducted. Our so-called "rotations" here, not only lack root crops, but anything else of any great importance, except clover and grass, to intersperse with the cereal grains. Indian corn, although varying in mode of culture and growth from wheat or barley, is also a cereal, and it is comparatively little change in the draft upon the soil—little actual *rotation*—to alternate one with the other. In Canada, they employ the *pea* largely for a rotating crop—a plant wholly differing in character from the cereals, and well suited for the purpose, while at the same time supplying an admirable food for sheep. Some of our best sheep feeders have constantly resorted to Canada, (except when the price arose too high to permit it,) for peas in preference to any other feed; our home markets do not supply them—indeed, as Col. JOHNSON says in the address referred to, Upper Canada produces nearly three times the quantity of peas raised in all our twenty-one grain-growing States put together! That the home market for them is tolerably good, we may infer from the fact that they are not always to be had here at a price admitting their liberal use.

Here we certainly have the elements of a more systematic and scientific culture than obtains among ourselves. The averages per acre of the crops in Canada West, as reported in the census of 1861, are very creditable to the practical workings of the system: they were, in bushels·

Fall Wheat,	17¾	Spring Wheat,	17¾
Barley,	23¼	Rye,	13¾
Peas,	20¾	Oats,	31¼
Buckwheat,	16¾	Indian Corn,	28

And although, as Mr. President JOHNSON states, "there are great difficulties in the way of the adoption of the system of rotation of crops practiced in Britain, principally owing to the expense of having the usual proportions of land under drill husbandry,"—still a much nearer approach has there been made to it, and the principles on which it is founded, than is the case in any large portion of our own country.

There is but one other statement in the paper before us, to which we shall refer. Adding together the total bushels of eight principal crops, (wheat, rye, Indian corn, oats, barley, buckwheat, peas and potatoes,) Col. J. finds that

		Per head of Population.
New-York produces,.....	106,073,936	or 27¼ bushels.
Pennsylvania, ...	94,077,287	32½ do.
Michigan, ...	31,355,917	41¾ do.
Ohio, ...	115,291,198	49½ do.
Canada West,.....	78,068,685	55¾ do.

"In examining these returns, we find that no State produced as much wheat as Upper Canada. But in the article of Indian corn, Upper Canada is decidedly below any one of these States in production; even the State of Maine, with its rigorous climate and poor soil, compared with its population, is far before us in this respect, showing that with respect to the estimation in which peas and Indian corn are held in Upper Canada and in these States, there is a very marked and striking difference; whether we or they are right in this respect may be a subject of controversy. It is, however, well understood in Canada that there is scarcely in the whole catalogue a more valuable article of produce than peas. I make this comparison in no spirit of vain exultation, but simply to show that, tried by this test, the Agricultural capacity of Upper Canada exhibits a favorable comparison."

We can at least compliment our Canadian friends upon the character of the exhibit, and the Provincial Association upon the able and practical address of its retiring President.

MICHIGAN STATE AG. SOCIETY.

EDS. CO. GENT.—The Annual Exhibition of the Michigan State Agricultural Society, was held at Kalamazoo from the 20th to the 23d inst. Considering the unfavorable character of the season—the severe drouth having extended over most of the State—the display of stock and productions in general was creditable.

As was expected, the number of cattle was less than usual, they being generally in too low a condition to show. Short-Horns and Devons were the only distinct breeds represented. The former were chiefly owned by two men—Mr. Uhl of Ypsilanti, and Mr. Sly of Plymouth. Another herd was represented by three animals bred by Mr. Sly. The pedigrees of the Short-Horns showed that but few of them belonged to the leading families of that breed. Mr. Sly exhibited the bull Orpheus, bred by Col. L. G. Morris, of New-York, his sire, Duke of Gloster, dam Songstress. Mr. Uhl showed a promising yearling bull, bred by Mr. Alexander of Kentucky, his sire Duke of Airdrie, dam Christine Catley. Mr. Conley of Marshall, showed a superior two year old bull, bred by Mr. Sly, his sire, Sixth Duke of Northumberland, bred by Mr. Stone of Guelph, C. W., dam, a cow bred by Mr. Sly. Among the Short-Horn cows, Mr. Uhl's Florence, whose pedigree I do not remember, was specially attractive. She would stand well in *any* show.

The Devons, with the exception of a yearling bull, were all owned by Mr. Allen of Coldwater. Some of them were very good, particularly a cow bred by Wm. R. Sanford, of Orwell, Vt., from stock imported by him from the herd of George Turner, Barton, England.

Under the head of *grades*, there were several cows and heifers, but none which had good points enough to make them *middling* animals. Notwithstanding the scarcity of grass, there were some very fat cattle exhibited. I do not know how they were fattened.

The show of sheep was very large—almost wholly Merinos. A few were shown under the head of Leicesters; but the only good ones I saw were two yearling rams from Canada. There were also a few sheep shown as South-Downs; but none that appeared to be well bred. The best of the Merinos were either bred in Vermont or immediately descended from Vermont stock. Specially noteworthy were a ram and five ewes, yearlings, owned by Mr. Perrine of St. Joseph's county, the ewes bred by Mr. Deane of Cornwall, Vt., and the rams bred by Henry Hammond of Middlebury; also a lot of two-year olds, owned by Mr. Watkins of Grass Lake, from the flocks Wm. R. and Edgar Sanford of Vermont. There were several lots of sheep exhibited by Vermont peddlers, some of which were good, and others not.

A few hogs were shown, most of which were tolerably well shaped. Some of them were of the so-called Chester County breed.

Of horses, the number of entries was upwards of 200. I had but little opportunity to examine them. There was considerable trotting and racing. (Some people call *trotting* racing.) If any thing was wanted to show the absurdity of the idea that running and trotting matches, as usually got up, tend to the improvement of the breeds of horses, it was given here. A horse which won the "citizens' purse" for the "best two in three," mile heats, would not probably sell for any useful purpose, for $150. I doubt whether he would be received for any purpose as an army horse. So, too, in running; the horse which took the first prize for a single dash of a mile, had scarcely a point which the breeder of horses for honest business would look for.

The show of fruit was small, but the character of the specimens of apples and pears exhibited indicate plainly that the soil and climate of the State are highly favorable to their production. Several lots of very fine grapes were exhibited. H. G. Blanchard of Detroit, showed Catawbas, Isabellas, Delawares and other varieties, grown on the shore of Put-in Bay, (Lake Erie,) of splendid appearance and excellent quality. He also showed samples of wine and brandy made from Catawba grapes, which connoisseurs pronounced of very fine quality for the age—two years.

There was a large show of vegetables, and, considering the unfavorableness of the season, the size and quality was much beyound what I had expected. Mr. Edward Wheeler of Kalamazoo, made a large display, comprising almost every kind usually cultivated for market in the northern part of the country. I have seldon, if ever, seen a collection superior to it in excellence. The articles were grown on irrigated land. I expect to have the opportunity of examining Mr. W.'s grounds next week, and may afterwards send you some account of his management.

The show of implements was large, but I do not know that it comprised anything of particular novelty or merit that would not be likely to be exhibited at the New York State Show, and the shows of other States.

The receipts of the show were $10,000. The receipts of the Sanitary Fair, which was held in the same enclosure, were $10,000. S. H.

Lansing, Mich., Sept. 26, 1864.

Cotton Culture in the United States.

MESSRS. EDITORS—Recent events have wrought extraordinary changes in the market value of both cotton and wool; and as I have given some study to the economical production of these important staples, I will devote one or more letters to the consideration of each. Cotton having advanced much more in price than wool, its cultivation and value will be first investigated.

At a time when the population of Illinois was about one-fourth what it is at present, the farmers in the southern part of that State returned a fraction over two hundred thousand pounds of cotton in the census of 1840. This fact is very suggestive, and impressed me the more forcibly from the circumstance that, immediatly after the election of Gen. Harrison in that year, I located several hundred acres of land for farming purposes in Southern Illinois, and spent a part of three summers there, and saw cotton successfully cultivated. From 1847 till quite recently, I have been connected with the agricultural press of Georgia, and enjoyed uncommon facilities to learn the climatic and other requirements of this interesting and useful plant. The market price of good cotton in Augusta, Ga., in the fall and winter of 1847, was five cents a pound; now I see it quoted in the city of New-York at one dollar and sixty-five cents a pound. The census of 1860 returns 5,198,077 bales of 400 lbs. each, which is equal to 2,079,230,800 pounds. These figures are copied directly from the Census Report, page 201. At a dollar and fifty cents a pound, which is about its market value, the above single crop would bring over three billions of dollars in our present currency. Mr. Dickson of Georgia, Dr. Phillips of Mississippi, and others, who have read and been instructed by the COUNTRY GENTLEMAN and CULTIVATOR many years, have long produced an average of over *four thousand pounds* of clean cotton to the hand. Every boy and girl big enough to hold up the handles of a light shovel plow, and follow a mule, is a "hand." That mules help small hands in walking may be inferred from the fact that some good planters cultivate sixty acres to the hand—say forty-five in corn and small grain, and fifteen in cotton. At the present price of cotton in New Orleans, a man working 100 hands would get $500,000 for one crop of cotton, and make more than corn and meat enough to support all on the plantation.

Cotton is not half so troublesome to raise as tobacco, which many northern farmers are cultivating successfully. The District of Columbia is full of negroes, many of them from plantations in Maryland and Virginia, who understand the southern way of plowing, planting, hoeing, and chopping out crops. Our armies have, by draft and otherwise, absorbed a majority of the able bodied men; but females will find cotton picking as easy as picking blackberries, and they are already field laborers of experience. House room is very scarce and dear here. Common hemlock and poor pine lumber cannot be had for less than $40 per 1,000 feet. Negroes that I have conversed with, sigh for plantation life; and a farmer who deserved their confidence might take them into a good cotton growing district, and cultivate the staple at an enormous profit. The cotton famine in Europe and this country must last six, eight or ten years; and there are 500,000 free negroes who ought to be set at work in cotton fields. These fields should be as well protected from hostile guerillas as possible. Probably the seacoast in North and South Carolina, Georgia and Florida is less exposed than Western Tennessee, or any part of the Mississippi Valley below Memphis. Military operations, however, may change the condition of things materially in a few months, and give to planting industry much better security in 1865 than it has had this year. From Alexandria on the Potomac to Memphis there is a continuous railroad that passes only through the two States of Virginia and Tennessee, and mainly in a grain-growing limestone region. All the way to Middle Tennessee, the people own few slaves except about Lynchburg, and have little sympathy with slavery or the rebellion. I have been frequently over the route, and two years ago, spent four months at the salt works near Abingdon, Va. If Gen. Burbridge has captured these works, as is reported, there is little to prevent his coming down to Lynchburg and passing around that strongly fortified city, to join Sheridan. I will not speculate on passing military operations; but I may remark that since cotton has risen from six to ten times its price five years ago, free colored people are worth twice as much in gold now as they were as slaves before the war. This remarkable appreciation in the market value of the labor of colored people ought to benefit them very much for the next ten years, in their transition state; and my humble pen is writing partly for that purpose, and partly to stimulate the enterprise and intelligence of young farmers to march forward and show themselves equal to the great occasion.

The downfall of slavery—should that happen—will not dethrone King Cotton, simply because the world's demand for cotton will remain quite as large and pressing without, as with slavery; and the manifold and unrivaled advantages which exist in the climate and soil of the South for the cheapest possible production of this staple will in no way be impaired by changing the condition of tropical field hands from that of being servants for life to being servants for a year. The productive powers of the operatives remaining the same, the climate the same, and the vast and ever expanding wants of mankind the same, pray tell me what is to cause the downfall of King Cotton? If slavery made cotton king, then the fall of the former might involve the demise of the latter; but instead of slavery making the intrinsic power of cotton in the commercial and industrial world what it is, cotton gave to servants for life, negro raising in Maryland and Virginia, and southern politicians generally, nearly all their consequence. Let every tub stand on its own bottom.

The wonderful agricultural resources of the South are the gift of God; and a boy, born and reared on a farm in New-York, by dint of patient study, so far developed these resources that he was offered the annual interest of $40,000 to go South and teach the true principles of tillage and husbandry. After years of labor against much sectional bitterness and opposition, the census of 1860 shows the following results, or coincidents:

Georgia, with a white population of only 591,588, returns personal property worth $438,430,946. The State of New-York in which there are many cities where personal property accumulates, with a white

population of 3,831,730, returned personal property worth $320,806,558. Say what you please *pro* or *con* in reference to slaves, the above statistics show the astonishing superiority of the climate of Georgia for agricultural purposes over that of New-York. Sound teaching brought out these resources.

The war is only demonstrating a second time, and on a magnificent scale, agricultural truths in relation to southern resources, which I demonstrated by clear scientific induction twenty years ago. (See an article on "Agricultural Meteorology," which I wrote and inserted in the Patent Office Report for 1849.) Cotton culture is soon to undergo an important transition; and I trust the COUNTRY GENTLEMAN will aid in making this transition as harmless and useful as possible. In my view, it is not less wicked than unwise to attempt to depreciate any of the gifts of Providence peculiar to our American climates. Neither the color of a man's skin, nor the accident of his birth, can affect these.

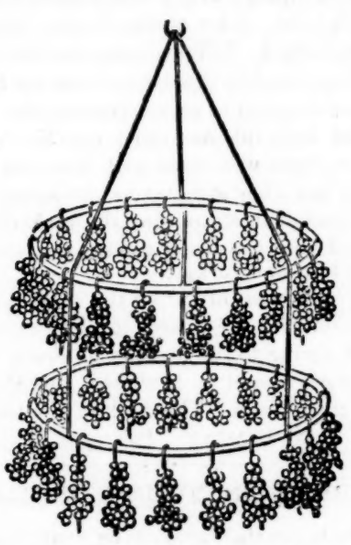
In another letter I will discuss the practical part of cotton culture. D. LEE.

District of Columbia, October 7, 1864.

KEEPING GRAPES.

Will you please inform me of the best method of saving grapes for winter use? Would chaff be suitable to pack them in? Z. Mc.W.

The first great requisite for keeping grapes well, is to have them well grown and well ripened. The stems should not be green, but full maturity indicated by their having become to some degree the same color as the grape. The grapes should be full sized, having been grown on well cultivated and well pruned vines. After this it is not essential how they are kept, provided they are in a cool, rather dry apartment, and not placed in large masses in contact. Some delicate varieties do better by being hung up, as represented in the annexed cut, so that the berries may hang apart and not touch each other.



Small wires of sufficient stiffness, and a few inches in length, are bent into hooks in the shape of the letter S; one end is passed into the smaller end of the bunch, and the other placed upon a suspended hoop.

It is hardly requisite to remind those accustomed to the successful keeping of grapes, of the necessity of careful picking, and the removal of imperfect or decayed berries. Most of our American varieties may be easily kept packed in cotton batting or dry maple leaves. Chaff would do, but would be liable to stick to the grapes. They should be kept in a cool place, but a slight frost will not injure them if they have become fully ripe. A good way for keeping them is as follows: place them in broad shallow boxes, about six inches deep, with a white sheet of unsized paper on the bottom and between each layer of grapes. Set the box uncovered in a dry open place for about ten days, till all the surplus moisture has evaporated; this will prevent future moulding and decay, and is very important. Then cover the boxes with covers which have been previously made to shut tight. Place them in a cool cellar, or in a garret not subject to severe frost, and they will keep till spring as fresh as when packed away.

A convenient size for the boxes is two feet square and six inches deep. These are rather better than tubs made from barrels cut in two, by allowing the moisture more readily to escape. Baskets for packing should be avoided, as, by yielding, they bruise the fruit. A convenient way for gathering is to suspend a light shallow box, holding about half a bushel or less, by means of a strap to the neck, leaving both hands at liberty. In this box they may be carried to the place of packing.

About Pulling and Securing Beans.

EDITORS CO. GENT.—The difficulty of securing beans has for years been a serious objection to my raising them except in limited quantities. The past season, having seen instructions in your paper that encouraged me, I enlarged my crop; and I have succeeded satisfactorily in curing by following the directions of F. on page 169, vol. 22, as to the time of pulling, which are to "pull just as quick as the greatest portion of the pods have turned yellow, when all the leaves are on the straw." I took my directions for "stacking and drying beans" from page 107 of same vol., only I would use the word *parallel* in that article for the words "*right angles*," which I think is really meant by the writer, and I have practiced accordingly, which is in short, as follows: Set two stakes firmly in the ground two or three inches apart; tie them together about 18 inches from the ground with a withe; then lay the roots of a handful of beans between the poles, first on one side and then on the other, so as to have the tops lie outside, in opposite directions, till near the top, pressing them firmly down between the stakes; then tie with another withe, drawing the stakes together sufficiently to hold the roots in their place; then fill with beans as before, as high as is convenient; put on a cap of beans or straw, and the stack is complete. They are moved with ease and without waste, for by simply pulling up the stake they can be carried stack, stalks, and all together, to the thrashing floor. Thus my greatest hindrance to raising beans is removed. S. S. W. *Little Falls, N. Y.*

ORCHARD GRASS---(*Dactylis glomerata.*)

I am very much in favor of this grass for hay or pasture. My experience amounts to this: Fifteen years ago I sowed an acre of Orchard grass and an acre of Timothy along side of each other, and have cut every year for hay. The Orchard grass still holds out, perfectly clean and free from daisy or Blue grass, whereas the Timothy has not been fit to cut for five years, being completely overrun with Blue grass and daisies.

Timothy will yield more to the acre, but it is not as good for pasture as Orchard grass, nor does it mature as early by three or four weeks—nor is it so good for durability, and it grows better in the shade.

Mt. Carmel, Ohio. T. V. P.

THE GREAT BUSTARD.

"The Great Bustard," says Rev. J. G. Wood in his Illustrated Natural History, "our English representative of the Otidæ, is now scarcely ever seen in this country, although formerly very common. It runs with great swiftness, and will never rise on the wing until forced, so that instances have been known of Bustards being captured by greyhounds. It is exceedingly wary, and can hardly be approached within gunshot, except by adopting some disguise, as a laborer with the gun in his wheelbarrow, or by driving a cart or a carriage by the spot where it is feeding.

The male bustard possesses a membraneous pouch on the fore part of the neck, capable of holding six or seven pints of water. There is an opening to this pouch under the tongue, and its use is possibly like that of the Pelican, to carry water for the use of the young, but this is not ascertained. The length of the bird is rather more than three feet. Its nest is a loose heap of straw on the gronnd, and contains two pale brown eggs spotted with brown, rather larger than those of the turkey.

The Capercaillie or Cock of the Wood is another of the Bustard family, and is common in most parts of Northern Europe, and was once to be found in Scot land and Ireland. The male is a large bird, almost equalling a turkey in size, but the female is considerably smaller. In the early part of the spring, before the snow has left the ground, this singular bird commences his celebrated "play." This play is confined to the males, and usually takes place in the early dawn of the day to sunrise or from a little after sunset until it is quite dark, and is intended to give notice of their presence to the females who are in the neighborhood. "During the play," says Lloyd, "his neck is stretched out, his tail is raised and spread like a fan, his wings droop, his feathers are ruffled up, and, in short, he much resembles in appearance an angry turkey-cock. He begins his play with a call something resembling *peller, peller, peller!* these sounds are repeated at some intervals, but as he proceeds they increase in rapidity, until at last, and perhaps after the lapse of a minute or two, he makes a sort of gulp in his throat, and finishes, with sucking in as it were, his breath.

"The play of the Capercaillie is not loud, and should there be wind stirring in the trees at the time, it cannot be heard at any considerable distance. Indeed, during the calmest and most favorable weather, it is not audible at more than two to three hundred paces.

"On hearing the call of the cock, the hens, whose cry in some degree resembles the croak of the raven, or rather, perhaps, the sounds *gock, gock, gock!* assemble from all parts of the surrounding forest. The male bird now descends from the eminence on which he was perched to the ground, where he and his female friends join in company. The Capercaillie does not play immediately over the forest, but he has his certain stations for his play grounds. These, however, are often of some little extent. Here, unless very much persecuted, the song of these birds may be heard in the spring for hours together. The Capercaillie does not during his play, confine himself to any particular tree, as Mr. Nillson asserts to be the case, for on the contrary, it is seldom he is to be met with exactly on the same spot for two days in succession."

The female makes her nest upon the ground, and lays from six to twelve eggs; her brood keep with her until the approach of winter, but the cocks separate from the mother before the hens. The food of this bird consists of the leaves of the Scotch fir, of juniper berries, cranberries, blue-berries, and occasionally in winter of the birch. The young are sustained at first on insects, and especially on the larvæ of ants. In the male the wind-pipe makes a loose fold, or two curves, before it enters the chest, gaining by this contrivance great increase of length.

The general color of the males on the upper part is chestnut-brown, irregularly marked with blackish lines; the breast glossy, greenish black, passing into black on the upper surface; elongated feathers of the throat black; tail black. In the female the head, the neck and back, are marked with transverse bars of red and black; the under surface is pale orange-yellow, barred with black. Nillson assures us that the Capercaillie is often reared up in a domestic state in Sweden, and is bold and disposed to attack persons, like the turkey-cock; and both this naturalist and Mr. Lloyd affirm that these birds will breed with due care in confinement; in fact they give several instances by way of proof. Brockstein states that the cock of the woods will breed with the black grouse, and even with the domestic fowl and turkey.

In the early part of spring the markets of London are supplied with these birds in abundance from Norway, and owing to the rapidity of steam navigation, the birds are almost as fresh as if just shot, opening well for many days. The flesh of the females is excellent. C. N. BEMENT. *Po'keepsie.*

RABBITS IN YOUNG ORCHARDS.

Rabbits begin their assaults on young orchard trees in Southern Ohio, on the second day after a fall of snow. They were troublesome in my neighborhood until the winter of 1862. Then it was discoved that the trees could be protected by rubbing the body of each with the fat side of a rind of pork or bacon. Let this rubbing be done once, for the distance of a foot above the snow, and the trees are perfectly safe throughout the season. I know it to be so. A. D. C.

Lynchburg, Ohio.

WILD PIGEON---*Ectopistes migratoria*, Sw.

That illustrious pioneer of American Ornithology, WILSON, and his not less famed follower, AUDUBON, has described the history of this bird in a most truthful manner, and if, in the course of the present article, we have to draw upon their stock of learning, due credit will accorded.

Two peculiarities of the Wild Pigeon are particularly noticeable; first, their immense range of country, and second, their propensity to associate in immense flocks. Their range of country extends from the Gulf of Mexico to the high central plains.

The Wild Pigeon is gifted with most astonishing powers of flight, both as respects endurance and speed. When we state that a mile a minute is their usual speed in travelling, and that this is sometimes kept up for hours together, some idea may be formed of the country they pass over. They associate together in numbers which seem almost incredible. Millions are often seen in one flock, and when the pigeons have once chosen upon a breeding ground, and have raised there young there, when they leave this spot, if it be a large wood, that which was before a forest has become a quantity of dismantled trunks of trees. The ground in such places is frequently covered over with the excrements of the pigeons to the depth of several inches. Indeed, the facts concerning the wild pigeons seem so incredible that we would be prone to doubt them had we not such undisputed authority as WILSON and AUDUBON, besides many others of lesser note.

AUDUBON, in speaking of the numbers that the pigeons associate in, says:

"In passing over the Barrens, a few miles beyond Hardinsburg, I observed the Pigeons flying from northeast to southwest, in greater numbers than I thought I had ever seen before; and feeling an inclination to count the flocks that might pass within the reach of my eye in one hour, I dismounted, seated myself on an eminence, and began to mark with my pencil, making a dot for every flock that passed. In a short time finding the task which I had undertaken impracticable, as the birds poured in countless multitudes, I rose, and counting the dots then put down, found that 163 had been made in twenty-one minutes. I travelled on, and still met more the farther I proceeded. The air was literally filled with the pigeons; the light of noonday was obscured as by an eclipse.

"Before sunset I reached Louisville, distant from Hardinsburg fifty-five miles. The pigeons were still passing in undiminished numbers, and continued to do so for three days in succession."

These migrations appear to be undertaken to obtain food, and they do not appear to be undertaken with any regularity, as no one can tell when the pigeons will leave a certain place or arrive at another. Wherever they go they are met by numerous enemies, who seek by every means within their power to lessen their number. The devices used in destroying them would take more space to detail than we can conveniently spare. However, we must notice a few of the most common. One of the most primitive, but not the less useful on that account, is for a man to have a long pole, and by means of this pole to knock down the pigeons as they fly over him. As they often fly within ten feet of the ground, vast quantities of them are captured in this way. Another way is to have burning pine knots, with which they scorch, and thereby kill such ones as pass near them. Large fires are also used in the same way. Sulphur is used sometimes to suffocate them. And then guns are also used sometimes, but the latter way is probably the least effective, for although perhaps a dozen or more can be killed at a single shot, the other methods bring in the most birds.

The Wild Pigeon feeds on beech-nuts, acorns and the smaller fruits of the forest trees generally. And here we take the opportunity to state that their feeding grounds are always at a considerable distance from their roosting places—sometimes the distance amounting to sixty or seventy miles. This to most birds would be a long journey, but to birds possessed of such powers of flight as the Wild Pigoon is, this is nothing. We may reasonably presume that this flight of sixty or seventy miles is no more to them than a "constitutional" walk is to a man after his dinner. Various authors have given different reasons for this peculiarity—we speak of there often being such a great distance between their feeding grounds and their roosting places—but the most rational one that we have seen suggested is that they are frequently obliged to change their feeding ground on account of the supply of food having given out, but that they return to the roosting places with the same pertinacity that a chicken clings to his chosen roost.

We will now borrow from WILSON the following account of one of their *breeding places*, for it must be understood that these wonderful birds not only feed together, fly together, and live together, but they also *breed* together:—

"* * * Not far from Shelbyville, in the State of Kentucky, about five years ago," [five years ago from when WILSON wrote this in 1812.] "there was one of these breeding places, which stretched through the woods in nearly a north and south direction; was several miles in breadth and was said to be upwards of forty miles in extent! In this track almost every tree was furnished with nests, wherever the branches could accommodate them. The pigeons made their first appearance there about the tenth of April, and left it altogether, with their young, before the twenty-fifth of May.

"As soon as the young were fully grown, and before they left the nests, numerous parties of the inhabitants from all parts of the adjacent country came with wagons, axes, beds, cooking utensils, many of them accompanied by the greater part of their families, and encamped for several days at this immense nursery. Several of them informed me that the noise in the woods was so great as to terrify their horses, and that it was difficult for one person to hear another speak without bawling in his ear. The ground was strewed with broken limbs of trees, eggs and young squab pigeons which had been precipitated from above, and on which herds of hogs were fattening. Hawks, buzzards and eagles were sailing about in great numbers, and seizing the squabs from their nests at pleasure; while from twenty feet upwards to the tops of the trees the view through the woods presented a perpetual tumult of crowding and fluttering multitudes of pigeons, their wings roaring like thunder; mingled with the frequent crash of falling timber; for now the axe-men were at work cutting down those trees which seemed to be the most crowded with nests, and contrived to fell them in such a manner that in their descent they might bring down several others, by which means the falling of one large tree sometimes produced two hundred squabs, little inferior in size to the old ones, and almost one mass of fat. * * *"

It is perhaps unnecessary to state that the "Wild Pigeon" and the "Passenger Pigeon" are one and the same bird.

J. P. NORRIS.

THE CULTIVATOR.

ALBANY, N. Y., NOVEMBER, 1864.

☞ An announcement is presented on another page of this paper, of the Terms offered for 1864, to subscribers of the COUNTRY GENTLEMAN and THE CULTIVATOR. Those who are conversant with the increased rates of other Journals, will not need to be told that the advance is less than that of nearly all our contemporaries; and from the present prospect in the paper market, it is more than likely that we shall be compelled *ere long* to withdraw the present offer of Club rates, if not to make a material increase throughout. These Terms however, will remain open until the 1st of December, and for THE CULTIVATOR until the first of January, and remittances sent before that date will be credited accordingly.

We trust our readers will therefore see their interest in making an early movement to secure full clubs for 1865.

It would not be in our power to offer rates so favorable, but from the hope—based upon the unusual degree of friendly interest manifested through the past year, in sustaining and enlarging our circulation—that this offer may elicit still stronger and more general efforts to secure for our Publications a wider circle of readers, and a yet more influential position as the organs of American Farmers. The field for such efforts was never so inviting as now. The abundance of money, the brighter prospects of public affairs, and the growing desire for periodicals that are really *practical and instructive to the cultivator of the soil*, all tend very much to favor the success of any exertions that may be kindly made in our behalf. In gold, or in wheat, or in pounds of cheese or butter or wool, our papers are cheaper than ever. We think the aid of all who are really disposed to promote a more systematic and more profitable management, and a more complete development of the Agricultural resources of the country, may be fairly claimed; and it is on this aid that we must depend for the introduction of our Journals to those who are not now familiar with their aim and character. For any profit to be derived from the terms we have announced, probably our own *present* interest might be that our circulation should diminish rather than increase,—but, looking to the future, when affairs shall have again returned to a firmer and more natural basis, it is greatly to our advantage that we should incur the risk of some temporary loss, if, availing themselves of the favoring circumstances for obtaining subscribers now, our friends thereby secure for us a list very greatly enlarged, that shall be permanent and at least self-supporting hereafter.

What we have before said in soliciting this co-operation from our readers, applies with double force in the present conjuncture: Our terms are too low to permit us to seek for circulation by the establishment of paid agencies, or by the costly systems of advertising which are sometimes adopted. And it is more in accordance with our own feelings, and with the precedents of more than thirty years' experience, that we should commit ourselves entirely to the voluntary services of those who appreciate the cause in which we are laboring, and the degree of success, however small, which has attended our labors. In this dependance, as we said last year, we have never been disappointed; the result the current season was an addition to our list, only excelled in some of the most prosperous years of former peace and tranquility. It is true that the enhanced expenditures due to the anomalous condition of the currency, have unexpectedly prevented the realization of any immediate benefit for ourselves; but, as above intimated, we are willing to look beyond the present, and, now as then, shall be satisfied to rest our case in the good will and judgment of our friends.

More than the wonted space has already been taken up by these personal matters; and yet we cannot but think that every reader individually has as deep an interest as our own, that his Journal should occupy constantly a higher rank among publications of its class, and unite in itself the opinions and experience of as many as possible of the best farmers of every State. There are some of our subscribers and some of our contributors, whose thorough knowledge of their pursuit may be but little increased by what we bring before them from week to week; but their subscriptions are important to us as an example to others, and their contributions are of the highest value to less experienced and less judicious managers. A paper like this is very similar to a Society in itself—the very fact that its membership is increasing is not only a token of prosperity, but authorizes it to speak for, and to reflect the sentiments of, a more important portion of the community—provided of course, its support is derived from that class in the community who are immediately concerned in its operations. It is when a Farmer's paper is *read by farmers*, made up of the experience of *farmers*, and does its utmost to elucidate the *farmer's* own interests—not to amuse him by mere variety, however interesting, nor fearful to risk its popularity by the expression of honest convictions,—that it really assumes position as a guide or organ of those who sustain it. And the more who take part in its discussions, the better it fulfils its end, and the greater the service it is enabled to perform.

— To these remarks, and to the Terms elsewhere given, the kind attention of each individual reader is asked, not alone among our personal acquaintances, but also from those whom we never meet except in print and through the mail.

Valuable Herds for Sale.—From the advertisement of Mr. J. R. PAGE, auctioneer, in another column, it will be perceived that the remainder of the Herd of the late Col. F. M. ROTCH, together with the Herd of T. L. HARISON, Esq., of Morley, are to be sold at Public Auction. Both being at points somewhat distant from the ordinarily travelled routes, it was concluded to select Albany for the place of sale, as the most convenient of access to the public; and the use of the Barns at Mt. Hope has been kindly granted for the purpose by E. P. PRENTICE, Esq., of this city, himself one of the earliest, largest, and most successful of American importers and breeders of Short-Horned Cattle. The time appointed is Wednesday, Nov. 16th, at 2 P. M. Catalogues will soon be ready. The sale will begin *promptly* at the hour named, and this will allow of sufficient time for examination of the stock during the earlier part of the day.

The reputation of the late Col. ROTCH as a judge of improved cattle, as well as that of his father, the venerable Ex-president of the State Agricultural Society,—not less than the high standing of Mr. HARISON's herd, the pedigrees and appearance of which will speak well for themselves, must call together a large company and attract spirited competition.

The Albany County Fair.—The exhibition of the County Society last week, although very meager in most departments, included a limited display of fine stock, fruit, implements, etc. The Short-Horns of Col. W. H. Slingerland, the Devons of Capt. Jos. Hilton, the Herefords of E. Corning, Jr., the Long-Wooled Sheep of Jurian Winne, Col. Slingerland, John Soop, and several others, the South-Downs of George Cary, Mr. Corning, and others, the Merinos of W. H. Bender, P. S. Gifford, and others, with fat sheep from several exhibitors, and a small display of working oxen,—altogether presented samples of the leading breeds, mostly of high character, and only lacking in the number of exhibitors to have rendered it very creditable to the county. There were but few swine on the ground. The display of poultry was large and varied—mainly from E. A. Wendell, Peter Van Wie, Wm. Richardson, Thos. Waring, E. W. Seymour, and others. Col. Slingerland had a good show of apples, very nice specimens, and we believe about forty varieties. John Sloan for Mr. Corning, also showed a fine display of apples, and some very good vegetables—egg plants, cauliflower, kale, etc. In vegetables, indeed, the exhibition was pretty good. There was something of a display of grapes, native and foreign, but much smaller in extent than has sometimes been the case, and the same is true of pears and other fruit. Wheeler, Melick & Co., and L. & P. K. Dederick were leading exhibitors of implements, with Martin Hallenbeck, C. T. Bush, and P. E. Jones, in mowing machines.

If the Society was regarded purely as the organ of the farmers and mechanics of the county, its exhibitions in all departments would doubtless be much increased; but so important a place is given to horse-trotting and other sensation features, that there is less encouragement to show in the quieter departments of agriculture, horticulture, and manufactures. The receipts are said to be about $3,500, which, with the increased expenditure incurred, is probably no more than enough to cover premiums and other outlay.

Pittstown Apple.—We have received a box of specimens of this apple, from Mrs. VAN NAMEE of Pittstown, N. Y. We have given it a full trial, not only as a table fruit, but for stewing and baking, and it appears to be a fine variety. It stews well without sugar. To those who are familiar with other sorts, we can perhaps give the best idea by stating that it appears to be intermediate both in flavor and appearance, between the Fall Pippin and Fall Orange. It is of rather large size, measuring three inches in diameter each way, roundish, slightly oblong, handsome, smooth, and regular; skin, light yellow, often with a fine blush; stem in a wide and deep cavity; calyx with long segments, in a wide wrinkled basin; flesh yellowish white; tender, mild sub-acid, slightly spicy, with a "good" or "very good" flavor.

If productive, and succeeding well in other localities, it is no doubt worthy of extended cultivation as an autumn variety. We have placed the name at the head of this article as as temporary one, till a better is found.

Another Change.—Our readers are already aware of the enhanced cost of publication which has resulted in the discontinuance of a considerable number of the Agricultural Journals issued prior to the rebellion, and in various changes among those which still appear. The American Agriculturist, which increased its club price from 80 cents to $1 per year, two or three months ago, appears for September with 24 pages instead of 32. This rise of one-quarter in price accompanied by a reduction of one-quarter in quantity, illustrates very well the present condition of affairs, but we can hardly see why our contemporary should claim especial credit for "fighting hard to keep to old terms."

A New Apple—"The Warfield."—This is the handsomest apple I have ever seen, and so say all who have seen it, and more especially a basket of them. It is a seeding, the original tree standing in Mr. Warfield's orchard in my neighborhood. Before I commenced grafting them, the boys told me they could peddle far more apples of the 'Warfield Seedling,' than of any other variety they ever had—therefor it is the very best market apple for August and September. Tree pyramidal shape, top high, lower branches spreading, thrifty and quite hardy, having stood many of our *hard winters of Iowa uninjured*, quite productive, a fair crop every year, and some years a very large crop. Fruit medium size, very round and fair, somewhat resembling Maiden's Blush, but not as oblate nor as deep a blush, and more of the white waxen appearance—*most beautiful:* flesh tender, pleasant acid, very good for cooking, *best* even in July when two-thirds grown. SUEL FOSTER.

Muscatine, Iowa.

Mr. FOSTER sends us a wax model of this apple, which may be seen at this office for the present. We shall hereafter deposit it in the Museum of the State Agricultural Society. It represents an apple, medium in size, yellow with a fine blush, and very beautiful in appearance. Mr. F.'s advertisement will be found in another column, and judging from what he says of the merits of this new variety, it is certainly well worth the attention of fruit-growers.

Jars for Canning Fruit.—We are indebted to the "Sheet-Metal Screw Co.," New-York, through L. R. BOYD, Esq., Treasurer, for a sample of the Glass Jars made by them for Preserving Fruit, to the number of three dozen. By the use of an India Rubber ring, about the neck of the Jar, the cover which screws down, fits so closely as entirely to exclude the air, in a much more convenient, and we should think quite as effective way as by the use of wax or other sealing materials, while the contents of the jar do not come in contact with the rubber, and therefore receive no unpleasant taste from it. We are much pleased with the appearance of these Jars, which seem to be a great improvement, and shall give them a careful trial.

The Edmonds Pear.—Of all the new varieties tha have been discovered or introduced of late years, we have met with none that exceeds in delicious quality and fine melting texture, the EDMONDS. Its flavor is unique—combining delicacy and richness with a flavor that is hard to describe. Its good size, and the free growth of the tree, add to its value. It was discovered near Rochester, and introduced by ELLWANGER & BARRY, who, unlike many propagators that overpraise and sell at extravagant prices, have in their habitual caution against lauding new things, hardly done it full justice. We draw this conclusion from specimens which they have kindly furnished us.

A Heavy Loss.—We regret very much to learn that our young friend, Mr. JAS. S. MCCALL, of Lyons, has lost the valuable bull exhibited by him at Rochester, and especially referred to in our notice of that exhibition. "Second Grand Duke of Oxford," 3989, died October 1st., from the effects of a strain received by breaking through the floor of a cattle car on his way home from the State fair. He was 4 years old, roan, weighed 2,650 pounds, and was valued at $1,500. He had taken the third premium at the State Fair in 1862, and the second premium the present year—also the first premium at the Wayne County Fair in 1862, and the sweepstakes at the Fair of the same county in 1863. He will be with difficulty replaced. Mr. MCCALL sends us his new catalogue, which may be obtained by those desiring copies on addressing him as above.

State Sheep Association.—The meeting to organize this Society and the list of officers elected, were noticed in our last. The President, Dr. RANDALL, furnishes us the following statement of the probable programme for the year:—

"It has already been decided by the officers of the Association to hold a spring show of sheep in their fleeces. This will take place about the middle of May, and probably at Canandaigua, if the inhabitants of that place feel prepared to co-operate efficiently in the objects of the Association. Ample public notice will be given of the time and place. We have no doubt that a liberal list of premiums will be offered to the sheep of this and other States. It will probably be proposed to have portions of the competing sheep shorn publicly at the exhibition. It is proposed to have a daily sheep sale—for those wishing to sell; and this may be extended to other domestic animals brought by members of the Association. Public discussions of topics connected with Sheep Husbandry will take place on the evenings of the exhibition. Communications from persons feeling an interest in Sheep Husbandry, and who have any plans to submit in regard to the mode of holding the Spring Sheep Show, or in relation to conducting any of the other operations of the Association, will be thankfully received by the President. A winter meeting will be called to discuss subjects connected with the interests of Sheep Husbandry. Sheep Breeders, Wool Growers, Wool Manufacturers, and all other persons interested, are invited to become members of the Association. They can do so by forwarding their names and the annual price of membership (one dollar) to the Treasurer, either of the Secretaries, or the President."

Ohio.—The State Fair at Columbus, Sept. 12–17, was successful and well attended. The Ohio Farmer remarks:—

In the Department of live stock, Sheep were the principal feature, and were better represented than we have ever seen at any State or other exhibition. We have seen more sheep at some Fairs, but never so many of such high excellence, at one place. The largest number of sheep were Spanish merinoes; there was also a superb show of Leicesters, Cotswolds and South Downs. * * * The Cattle Department was a lonesome place, with plenty of empty stalls. * * * G. M. Coulter of Clinton showed some of his Short-Horn stock. Messrs. Powell of Reynoldsburg had several stalls of fine Short-Horns, among which was the prize bull Washington Day. Hills and Jones of Delaware made a fine display of Short-Horns, and won the herd prize. D. McMillan had some splendid animals in this class, and carried off his share of the red ribbons. C. M. Clarke of Clarke Co. had a good show. John F. Ijams of Franklin Co., the old cavalry scout, has returned from the wars and showed the best of his herd, some of which is stock which he realized in his Kentucky campaign. Mr. Vezey of Columbus, was also an exhibitor in this class. With two or three fat cattle, this is the end of the cattle Department, which has heretofore been a big thing at the Ohio State Fairs.

There was a handsome show of thorough-bred horses.

Next to sheep, the only other well filled Deparment was that of Farm Implements and machines. In this there was an excellent display. The show of fruit was not large and we missed many of our best orchard men who were off to the meeting of the Am. Pom. Society in Rochester. The receipts of the whole Fair, exclusive of the $5,000 subscribed by the citizens of Columbus, were $12,724, being larger by more than $1,500 than the receipts at the State Fair held at Cleveland last year.

Illinois.—The State Fair was held at Decatur, Sept. 12–17th. The Prairie Farmer says:

Though, as may be seen by our detailed reports, the exhibition in a few of its departments, fell below the standard of some previous years, yet taken as a whole, in all its bearings, we record it as the most successful of the exhibitions yet held since the organization of the State Agricultural Society. In this assertion we speak advisedly; * * we include something more than the mere show of blood-horses, cattle, swine, and sheep; something more than the mere display of the vast variety of implements that American genius has produced to lighten the toil and increase the profits of the husbandman. * * The people seemed, in a great measure, to have left at home the spirit of war and politics, and to have come together solely as agriculturists and mechanics, to visit, to see, to hear, to inquire, to judge, and to be amused. The higher and more progressive ideas, as well as the earnestness of the people, were strikingly manifested in the general feeling that was expressed regarding the college land grant at the meetings to which we shall elsewhere allude, and in the conversations between man and man.

If the implement and stock departments were less full than last year, a large share of the deficiency must be attributed to the want of capacity of our railroads to meet this additional call upon them for cars.

The receipts are stated at upwards of $17,000. The election of officers for two years to come, resulted in choice of—

President—A. B. McCONNELL, Springfield.
Vice-Presidents—John Wentworth, Chicago, at large, and one from each of 13 districts.
Board of Counsellors—1st Ex-President James N. Brown, Berlin; 2d Ex-President H. C. Johns, Decatur; 3d Ex-President C. W. Webster, Salem; 4th Ex-President Lewis Ellsworth, Naperville.
Treasurer—John W. Bunn, Springfield.
Corresponding and Recording Secretary—John P. Reynolds, Salem,—office at Springfield.

Steuben County.—Mr. MOORE of the Rural New-Yorker, says of the recent Show of the Steuben County Agricultural Society:—

"Though the day was very unpropitious—a severe rain storm prevailing—we found a creditable display, in some departments superior, and had the pleasure of meeting several ardent friends and promoters of Rural Improvement—including Judge Denniston, President of the Society, Gen. O. F. Marshall, A. Y. Baker, Esq., and others. The show of sheep was said to excel those usually made in Steuben, the most noted county in the State in that line. Of fine wools we have never seen a better display at any County Fair, and some claimed it to be superior to that at the State Fair. Gen. Marshall's flock was represented by over twenty fine animals. His ram "Compact" is a beauty and attracted much attention. Messrs. Stickney, Chicester, Straight, Thompson and others also showed fine animals in this class. The show of Horses, Cattle, and Swine was not large, but comprised some fine animals in each class. The rain precluded particular examination. The display in Domestic and Floral Hall was far better than we anticipated, and reflected much credit upon the exhibitors. The ladies exhibited abundant evidence of industry, skill and taste in the show of articles both useful and ornamental. In the Horticultural Department were some choice specimens of fruit, not the least attractive being the Grapes and Wine presented by the Pleasant Valley Wine Company of Hammondsport."

The address was delivered by L. H. TUCKER, of the COUNTRY GENTLEMAN, who did not reach the grounds, however, in season to see anything of the Exhibition—the stock having been already taken home. We were glad to renew very hurriedly the acquaintance of many old friends, and to hear so favorable a report of the prosperity of the Society and the excellence of the exhibition and attendance, in spite of the weather and the times.

A Liberal Offer.—We cut the following from a Rochester paper:—

"We have it from reliable authority that Hon. EZRA CORNELL of Ithaca, now State Senator, is about to offer to the State of New-York, three hundred acres of valuable land at Ithaca, and $300,000, to be appropriated to an Agricultural College to be located there. The offer is made upon certain conditions, which are, however, deemed so reasonable as to leave no doubt that the offer will be accepted. This will result in the establishment of an institution that will be a credit to the State and to the founder. Mr. Cornell, some time since, gave $50,000 to a public library in Ithaca, which is, we believe in operation."

We are happy to say that the statements contained in the foregoing extract are correct. Mr. CORNELL, by his proposed munificence, will entitle himself to the gratitude of the State, and we hope to see the enterprise projected with such liberality soon in a fair way for actual inauguration.

Inquiries and Answers.

Hydraulic Ram.—I wish to inquire of you for the best hydraulic ram for forcing the water from a spring to my barns. My spring is about thirty rods from the barns, and the water will have to be raised not far from thirty feet high. Now I would like to know the best way for fetching it, whether with a ram or engine, and where they can be had—also the expense of each—likewise the size of pipe, to be used. HENRY S. MILLER. *Wallingford, Vt.* [We are unable to give the minute details of the sizes of the different parts of the water ram, but these dimensions may be obtained of the manufacturer. The supply-pipe should probably never be less than an inch and a fourth in diameter, and to work well the stream should be about large enough to fill it. The smaller, or discharge pipe, need not be larger than one-half, or five-eighths of an inch in diameter. Rams are manufactured by Cowing & Co., and J. A. Rumsey, of Seneca Falls, N. Y., who can furnish prices and particulars. If the stream is not large enough to drive a hydraulic ram, it might probably be driven up the pipe by means of a forcing pump worked by a small wind-mill. Water engines promising to be of great utility, are also manufactured by H. H. Babcock, and M. Eames, both of Watertown, N. Y., from whom circulars may be obtained.]

Honey Dew.—We are having an unusual amount of honey dew for a week or two past. The bees are making good use of it, which they very much need in consequence of the dry weather of the past summer. Please be so good as to tell us what causes honey dew? A. FURNAS. *Danville, Ind., 9th mo. 22, 1864.* [Honey dew is a sweet substance ejected, as is generally believed, upon the leaves of plants, by a species of Aphis.]

Books.—*R. H. D., Ontario Co.*—We can send you the last edition of Todd's "Young Farmer's Manual," post-paid for $1.50.——*S. P., Pennsylvania.* The price of Mr. Mitchell's "My Farm of Edgewood," by mail, is $2 per copy. We have it for sale.——*N. R., Oneida Co.* The price of RURAL AFFAIRS was advanced some weeks ago to $1.50 per vol. See advertisement.

The First Horse Rake.—A correspondent of the Rural New Yorker, asks for the name of the inventor of the Revolving Horse-Rake. We made the same inquiry in our old *Genesee Farmer*, twenty-nine years ago. The late DAVID THOMAS of Cayuga county, informed us that "the horse hay-rake was invented by a colored man who lived on Hempstead Plain on Long-Island, who died about the year 1821. It was introduced into Pennsylvania by MICHAEL NEWBOLD of Oxford, Philadelphia Co., about the year 1812, in consequence of the representation of a Yankee peddler, who instructed him how to make one. His first rake was destroyed by a malicious person who feared its innovating effects on the price of labor." Our inquiry failed to elicit the name of the inventor, and we fear it cannot be ascertained at this late day.

Sorgho Seed for Hogs.—A correspondent of the COUNTRY GENTLEMAN lately inquired "if the seed of sugar cane can be safely fed to hogs?" To this the Agricultural editor of the Detroit Free Press replies as follows: "Not the least risk in the world. We have tried it. Hogs thrive well on sorghum seed."

Digging Peat—Cement Tile.—Will fresh muck dug now and spread during the winter in alternate layers over the barn-yard, with the manure as it comes from the stables, be sufficiently decomposed for corn ground next spring? or will muck put on heaps next month, and allowed to freeze this winter, be in a condition for very poor sandy soil by spring? I want to get the best and quickest way to use *fresh* muck. Perhaps W. J. Pettee of Salisbury, Conn., will oblige your readers with the result of his experiments with fresh muck, as tried during the winter of '61—62. See Co. GENT. March 13, 1862. In the Co. GENT. for 24th June, 1861, you describe a French machine for making cement tile, has it ever been used in this country—if so with what success? J. B. H. *Morristown, N. J.* [If muck is spread in alternate layers with manure, whether the former is fresh or not, the mixture will in a few months make an excellent compost. The drier the muck is the better, as it will absorb more of the liquid portions—when quite wet, it holds some eight or nine times as much water as its own weight, and if already saturated will of course be of little value when compared to its dry, spongy, porous character when dry. Muck differs a good deal in value, according to its accidental ingredients, and the character of the soil to which it is applied, and this value can be determined only by careful trial. Muck exposed alone to winter, will, if not too fibrous, be in good condition to mix with soil in spring, by harrowing thoroughly and plowing or otherwise intermixing intimately. We do not know that the way of making cement tile referred to, has ever been tried in this country.]

Gas Lime.—Can you or any of your correspondents give me any information with regard to the fertilizing properties of gas lime? How to use it? Whether it is of value to mix with muck, &c., &c. H. H. D. *Lewiston, Maine.* [Gas lime is valuable wherever common lime proves useful. It should be rather cautiously applied, or in rather small quantities.]

Moles.—A few years since I terraced a hill, the soil a sandy loam. Have used it since for a garden and small fruit. For the last two seasons the ground moles have completely over run or *under run* it. Strawberry plants entirely destroyed, and most plants greatly injured. Scarcely a foot of soil where they have not run. Can any one give the cause, or more important, how to exterminate them? W. C. S.

Salt Rheum.—Although not in your line, will you make the following inquiry in your papers. As you have published a number of remedies for the cure of man and beast, I would take it as a great favor to find out what would cure salt rheum of two years standing, on the right leg. As I have applied several remedies without success, if you or any of your numerous correspondents can inform me how I can effect a permanent cure, by doing so through the columns of THE CULTIVATOR, they would be entitled to the gratitude of their fellow-beings. AN OLD SUBSCRIBER. *Lower Canada.*

Slabbering.—I have a right good milch cow that slabbers awfully, while she is chewing her cud—more so at night than in the day time. The saliva runs out of her mouth in a perfect stream; sometimes it covers a piece of ground two feet square, and runs on the ground a distance of six feet. She seems well, looks well, and eats well, though somewhat thinner than the other. I wish some of your correspondents would please tell me through the GENTLEMAN, what the cause is, and whether there is any cure for it, or whether there would be such a thing as getting her fat. She has been fresh about three months. W. *Chester Co., Pa.*

Propagating Osage Orange.—Mr. A. KILLGORE inquires about propagating Osage Orange from cuttings. I have twice, with good success, used pieces of the roots to make plants, as follows:—when taking up one or two year old plants to prepare them for the hedge row, I pruned the roots, and cutting those of the size of a pipe stem and larger, in pieces six inches long, placed in well prepared ground suitable for starting cuttings, with the largest end just slightly covered with the soil. Nearly every one grew and made fine plants, as they would usually have more than one shoot from a root. I never used cuttings from the wood. A. S. Moss. *Fredonia, N. Y.*

Drying Fruit.—In answer to inquiries, I have to say that in Central Pennsylvania, a portable dry-house is much used. It is perhaps 4 feet wide, 6 or 8 feet long, and 5 feet high. Can be set anywhere in the yard. A small stove is placed inside, and used in wet weather, and in two minutes the fruit can be either fully exposed to sun and wind, or closed up secure from rain. About two bushels of pared fruit can be dried in 24 hours. Those who use them speak highly of them. They are patented. I cannot give the name of the patentee, nor accurate particulars. W.

Concrete Walls.—You answer T. J. C. as to how to make concrete walls, in No. 7, Aug. 18, so that it will make them very expensive. You have told him how to make mortar, not concrete. To this mixture or mortar tell him to add as much clean gravel—say the size of hickory nuts,—as it will hold possibly, and at the same time leave the interstices just filled. Or what will make it a little stronger, make the mortar two parts sand, clean and coarse, and one part water lime, and mix it thoroughly—then add the gravel and use immediately, and not disturb it after. M. S. KIMBALL.

Canada Thistles.—I see an inquiry for a good mode of killing Canada thistles in the Co. GENT. of July 21. I have seen several such inquiries before, and have been surprised that no one has given the true answer to them. Let your thistles grow as long as you can and not have the seed mature enough to grow. Then mow them close to the ground. The next year they will be few and weak, and a second cutting will finish them. I do not think that a "patch" of Canada thistles was

ever subdued by plowing or hoeing. Have tried both methods thoroughly several times, but always failed. Fields in which the Canada thistle has become troublesome, should be stocked down and mowed, and they will soon disappear. D. H. O.

Troublesome Weed.—I herein enclose you a better specimen of that weed I sent you some time ago. I have no doubt there is some thousands of seed on this sent from one root, and there were some I saw that must have twice as many seeds as this one. They are on a farm adjoining mine. There was a crop of wheat taken off the field this season. The field was seeded with clover and Timothy, but where this weed stands thick, it has undisputed possession. The owner of the farm only noticed it a few days ago, and said he would not have noticed it, had I not called his attention to some dead stalks of it on his summer fallow, when drilling his wheat. He is going to plow the field at once, and plow it again before winter sets in, and plow it all next summer; but I think if he sows it next September with wheat, it will still come up. I think it very probable that it will require two seasons' tillage without a crop, to subdue it. I never saw any root produce so many seeds. I gave my field thorough tillage, sowed it again with wheat, and am in hopes that it may be destroyed, as none of it went to seed the last two years. Can you give us anything about it, or is it something new under the sun? JOHN JOHNSTON. *Near Geneva, Oct.* 8. [A notice of this plant was given on page 176, current volume of the Co. GENT. We may add to that notice, from the better specimen now sent, that it has numerous small pink flowers, not much larger than a pin's head, and small lance-linear leaves about an inch long and an eighth of an inch wide. We are not familiar with this species—it is evidently introduced with foreign seed, and unless promptly subdued, may prove very troublesome. The number of our weeds is increasing, and calls for such a system of rotation and assiduous tillage as shall keep them under, if not eradicate them. Those which increase only by roots, are comparatively easily destroyed by repeated deep and thorough plowing, thus smothering and killing the plant. Such treatment is especially applicable to Canada thistles, milkweeds, &c. Those that increase by the seeds, are more difficult to get rid of, as these may remain dormant below the surface of the soil for years, until brought up near the air by cultivation, and thus induced to germinate. Such weeds have proved particularly troublesome to the wheat crop. Among them may be mentioned the large May-weed and red-root, and unless care is taken, this species of *Polygonum* may be added.]

Plans of Houses.—I wish to build a house, and being desirous to look over different plans, I wish you could direct me where, and at what price, postage included, I can get the best book with plates, &c., and the title thereof? I wish to see cuts of farm houses from $1,000 to $8,000, so that I can plan one from different plates. J. S. GOE. [We can recommend nothing more likely to be of service to you than the Three Volumes of RURAL AFFAIRS—price $4.50. The *Annual Register* for 1865, will also contain a number of excellent plans. If you are provided with these, and still require aid, we scarcely know what to suggest, as most of the works on Rural Architecture refer mainly to expensive buildings, *not* such as a farmer is likely to build. Valuable hints however may be derived from such works as that of Mr. VAUX, published by Harper & Bros., New-York.]

Cross Cut and Circular Sawing Machines.—Having had considerable experience in the use of a wood sawing machine, and having made inquiries of the manufacturers in reference to them, I can perhaps furnish the information which "S. R. N." desires. The best machines, so far as I am aware, are made at Norwalk, Huron Co., Ohio, by Messrs. White & Bostwick, and also by the Warner Brothers. These machines are shipped hundreds of miles, and have given universal satisfaction. White & Bostwick's machine has taken the premium over Warner's at the last two Ohio State Fairs, but I believe the last named to be the best machine. The trial between them was one of the main features of our late County Fair, the strife between the two firms being about as great as in a literary way exists between the publishers of Webster's and Worcester's Dictionaries. Warner's machine did one-third faster sawing, but I think it was almost wholly owing to the better condition of their saws. Their cross-cut machine sawed a soft maple, cut 16¼ inches through, in 10 seconds, or a little more than one circuit of the horses. It has also sawed 32 cords in six hours, and 100 cords in two days, but this is remarkable work, and indicates an exquisitely good condition of the saw, and a frequent change of horses. Twenty cords is a fair average day's work. The capacity of the circular saw is limited only by the supply of timber. The weight and strength of the horse power is well adapted to the work required, and is easily run by two horses. One important feature of these machines is the saw, guide and log-holder, which by a system of easily adjustable levers, holds a cut 10 inches long, and from 4 inches to 3 feet in diameter, perfectly solid while being sawed into. The price of each cross-cut machine, including horse power, saw, saw guide and log-holder, railway and truck, all complete, is $110; with the circular attachment, including with the above, rumbling shaft, belt, saw and table, $210. The circular sawing apparatus alone is about $150. The cross-cut machines are freighted at 1,200 pounds. The circular attachment would probably weigh 300 pounds more. A. FRANK THOMAS. *Hartland, Oct.* 3, 1864.

What Pump to Get.—In the Co. GENT. of Sept. 29, a writer asks which is the best pump for a cistern? Now it is not my desire to "puff" through your columns for any one, but I asked that question a great many times, and got my knowledge at a high rate, and feel it a duty to give some little information where I can. By all means use one of J. D. WEST & Co.'s anti-freezing and force pumps. They are to be had at 179 Broadway, New-York. I have one of these pumps that raises the water from a well at the depth of 28 feet—to the nozzle I attach 56 feet of hose, and can drench my house with water in a very short space of time. They are just what every farmer ought to have. Without the hose they work so easily that any child that can do anything can pump water, and when attached as a force pump, it is all you could wish as a fire engine. They make them of all sizes, from the cistern pump up to a 12 inch stroke for a steam engine; and as it is really a first rate pump, it is nothing more than honorable that its merits be made known. They will raise water from a depth of 200 feet, and force it through hose a distance of 1,000 feet.

I have no interest in giving this communication, more than to let brother farmers know where they can find a thing of real permanent value. We have humbugs enough. Let us keep track of the things of real merit, and this pump is all you could ask for; at least that is my experience. I have had it running with a wind-mill all summer, pumping water from the river on my garden, and have just put it in my well at the house. O. H. KELLEY. *Itasca, Minnesota*, Oct. 5, 1864.

Wood Sawing.—Noticing an inquiry in your paper, for a wood-sawing machine, I would say that there is such a machine manufactured at this place by T. Cummings, which is the best machine for the purpose that I am acquainted with. *Byron, N. Y., Oct.* 3, 1864. H. T. MILLER.

An International Challenge.—The Rural New-Yorker says:

"The Toronto *Globe* is agitating the subject of a grand Provincial Exhibition, in which the two Canadas shall unite in offering $20,000 in premiums, and challenging New-York State to enter the lists in competition therefor. It proposes, as an inducement for exhibitors from long distances, that premiums be offered for leading products of the manufacturer and agriculturist only, so that they would tempt a large competition. It is asserted that leading agriculturists of Lower Canada are anxious to bring about such a joint exhibition."

We regret to have overlooked the articles referred to in the Toronto Globe. We were aware that such an Exhibition as is mentioned, has been talked of in the Canadas—to be held probably at the city of Montreal; and we unite with our contemporary in the hope that it may some time be effected. The only difficulty in the way, for the coming year, appears to be the location of the Show of Upper Canada, which has already been decided in favor of London. Should both the Provinces hereafter join their forces for a combined exhibition, the result could not fail to be most useful in rendering each better acquainted with the resources and improvements of the other, and in fostering a healthful rivalry; and the liberality which has dictated the idea of opening competition also to exhibitors from this State, we are sure must elicit a cordial response from our breeders and manufacturers. We can personally vouch for the correctness of the statement that "leading agriculturists in Lower Canada" have expressed a great interest in this movement, and do not doubt their efforts will be seconded in the Upper Province whenever the door is practically open for its successful inauguration. Certainly such an undertaking will never lack a good word, or if need be still more earnest co-operation from us.

Books.—We call attention to the advertisment of W. WOOD & Co., in the present number of this paper. Their intelligence, long experience and well-known integrity, will doubtless give stability and high character to their enterprise as publishers of agricultural books.

The Annual Register for 1865.—In another column will be found a notice of the forthcoming Number of the "Illustrated Annual Register of Rural Affairs," with terms, &c.

We think it one of the best, as it has been far the most costly in the series. Orders may be sent in at once to be filled as soon as it is issued—we hope within two or three weeks to come. No more agreeable or useful present could be made to one's young friends interested in country life, than to buy a dozen copies of THE ANNUAL REGISTER for distribution.

Corn and Barley Meal.—An experienced and skilful fattener of animals, recently expressed the opinion as the result of long trial, that a mixture of equal parts of barley and corn meal, was greatly superior to either alone; and that 45 lbs. of corn thus used, were more than equal to 60 lbs. of corn used alone. It may not be necessary to mix them in equal proportions, and if, as is now the case, barley should be somewhat higher priced, doubtless one-third would answer an excellent purpose. The subject is commended to the careful attention of farmers, now in the midst of the fattening season, and the results of their experience are requested.

Grain Separator.—At the exhibition o the Steuben County Agricultural Society at Bath, which we attended on Friday last, our attention was particularly called to a very ingenious machine just patented for screening grain, the invention of Mr. JOHN S. BODGE, and manufactured by Hoyt & Malette, Bath. A mixed lot of wheat, oats, peas, and all sorts of screenings, were completely separated by once running through the machine, and when the screenings were put through a second time, a farther quantity of wheat was obtained, including all the smaller and less perfect kernels.

Canada West.—The Annual Meeting of the Provincial Agricultural Society, for the election of officers, was held as usual, on the last day of the recent exhibition, the President, Col. Johnson, in the chair. J. C. RYKERT, Esq., of St. Catharines, was elected President of the Association for the ensuing year, Neil J. McGillivray of Glengarry, first Vice-President, and J. P. Wheeler, Esq., of Scarboro', second Vice-President. R. L. Denison, Esq., was re-elected Treasurer of the Association. On motion, London was unanimously chosen as the place for the next exhibition.

Michigan State Agricultural Society.—At the recent Fair the following officers were elected: *President*—WALTER G. BECKWITH, Cassapolis. *Treas.*—James A. Walters, Kalamazoo. *Sec.*—R. F. Johnstone, Detroit. *Ex. Com.*—W. F. Manning, Van Buren; John Allen, Plymouth; Marvin Dorrell, Jackson; A. S. Berry, Adrian; Sanford A. Yeomans, Iona; A. G. Bates, Monroe; Geo. W. Phillips, Romeo. The chairmen of the different county Societies were elected Vice-Presidents.

Cotswolds.—BURDETT LOOMIS, Esq., of Windsor Locks, Conn., a leading breeder of these Sheep, as well as of Short-Horn cattle, attended the recent Provincial Show at Hamilton, and purchased several valuable Cotswolds from the admirable flock of F. W. STONE of Guelph, ex-president of the Association. Mr. GAZLEY of Duchess, was also a purchaser for himself or others, from the same flock, the preceding week.

St. Lawrence.—Our County Fair wound up on Thursday in a heavy rain, after two very good days and a tolerably promising morning even on the last day.—The show was better than usual, and the receipts very good—about $2,100, which will pay expenses and give us quite a surplus towards paying old debts, and on account of the mortgage on the Fair Ground. T. L. H.

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